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Product name	CLEANCROP CHICANE	
		June 2019
Safety data sheet according to EU Reg. 1907/2006 as amended Supersedes September 2018		

SAFETY DATA SHEET CLEANCROP CHICANE

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	CLEANCROP CHICANE
1.2.	Relevant identified uses of the substance or mixture and uses advised against	Can be used as herbicide only.
1.3.	Details of the supplier of the safety data sheet	FMC Agricultural Solutions A/S Thyborønvej 78 DK-7673 Harboøre Denmark SDS.Ronland@fmc.com
1.4.	Emergency telephone number <u>Medical emergencies:</u> Austria: +43 1 406 43 43 Belgium: +32 70 245 245 Bulgaria: +359 2 9154 409 Cyprus: 1401 Czech Republic: +420 224 919 293 +420 224 915 402 Denmark: +45 82 12 12 12 England and Wales: 111 Estonia: +372 7943500 France: +33 (0) 1 45 42 59 59 Finland: +358 9 471 977 Greece: 30 210 77 93 777 Hungary: +36 80 20 11 99 Ireland (Republic): +353 1 837 9964 Italy: +39 02 6610 1029 Latvia: +371 670 42 473 112 Lithuania: +370 523 62052 +370 687 53378	Luxembourg: +352 8002 5500 Netherlands: +31 30 274 88 88 Norway: +47 22 591300 Poland: +48 22 619 66 54 +48 22 619 08 97 Portugal: 808 250 143 (in Portugal only) +351 21 330 3284 Romania: +40 21318 3606 Scotland: +8454 24 24 24 Slovakia: +421 2 54 77 4 166 Slovenia: +386 41 650 500 South Africa: +27 83 123 3911 (Bateleur Emergency Response Co.) Spain: +34 91 562 04 20 Sweden: +46 08-331231 112 Switzerland: 145 Turkey: 114 U.S.A. & Canada: +1 800 / 331 3148 All other countries: +1 651 / 632 6793 (Collect)

For fire, leak, spill or other accident emergencies:

U.S.A.: +1 800 / 424 9300 (CHEMTREC) All other countries: +1 703 / 527 3887 (CHEMTREC - Collect)



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SECTION 2: HAZARDS IDENTIFICATION

2.1.	Classification of the substance or mixture	None
	WHO classification	Class U (Unlikely to present acute hazard in normal use)
	Health hazards	No serious hazards to health are expected.
	Environmental hazards	The product is toxic to aquatic organisms.
2.2.	Label elements <u>According to EU Reg. 1272/2008 as</u> Product identifier	<u>s amended</u> Cleancrop Chicane
	Hazard pictograms Signal word Hazard statements H413 Precautionary statements	None None None May cause long lasting harmful effects to aquatic life. None
	Supplementary hazard statements EUH210	Safety data sheet available on request.

EUH210 Safety data sheet available on request. EUH401 To avoid risks to human health and the environment, comply with the instructions of use. 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.
		Cleancrop Chicane is a suspension in water of porous microcapsules containing the active ingredient clomazone.
	<u>Active ingredient</u>	
	Clomazone	Content: 32% w/w
	CAS name	3-Isoxazolidinone, 2-[(2-chlorophenyl)methyl]-4,4-dimethyl-
	CAS no.	81777-89-1
	IUPAC name(s)	2-(2-Chlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one
		2-(2-Chlorobenzyl)-4,4-dimethylisoxazolidin-3-one
	ISO-name	Clomazone
	EC no. (EINECS no.)	None
	EU index no	None
	Molecular weight	239.7
	Classification of the ingredient	Acute oral toxicity: Category 4 (H302)
		Acute inhalation toxicity: Category 4 (H332)
		Hazards to the aquatic environment, acute: Category 1 (H400) chronic: Category 1 (H410)



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	<u>Report</u>	able ingredients	Content (% w/w)	CAS no.	EC no. (EINECS no.)	Classification * = harmonised classification
	Sodium	nitrate	5	7631-99-4	231-554-3	Ox. Sol. 3 (H272) * Acute Tox. 3 (H301) * Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) *
		llfonic acid, sodium salt, ethylated	1	68512-34-5	None	Eye Irrit. 2 (H319)
SECT	TION 4:	FIRST AID MEASURES				
4.1.	Inhalati	otion of first aid measures on	Light case immediate attention in	s: Keep person ly if symptoms mmediately or c	under surveilland develop. Serious call for an ambul	
	Skin co	ntact		. Wash with wa		g and footwear. Flush skin t medical attention if any
	Eye cor	ntact	occasional Remove co	ly opening eyel	ids, until no evid er a few minutes	r eyewash solution, lence of chemical remains. s and rinse again. Get
	Ingestic	on	or milk, bu	it not induce vo	miting. If vomiti	ink several glasses of water ng does occur, let him/her edical attention immediately.
4.2.		nportant symptoms and both acute and delayed		activity, tearing		in this product caused from the nose and
4.3.	medica	ion of any immediate l attention and special			-	case of ingestion.
	treatmo	ent needed	It may be l	nelpful to show	this safety data s	sheet to physician.
	Notes to	o physician	lavage and considered	/or the administ	tration of activat	terial is not known. Gastric ed charcoal can be ent should be directed at the ition.

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.



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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.
		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 rubber boots.
		Stop the source of the spill immediately if safe to do so. Keep unprotected persons away from the spill area.
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, 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



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		the contaminated water. The contaminated water must be collected and removed for treatment or disposal.
6.4. Refere	nce to other sections	See subsection 8.2. for personal protection. See section 13 for disposal.
SECTION 7:	HANDLING AND STORAG	SE
7.1. Preca	ntions 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 mechanic means as much as possible. Adequate ventilation or local exhaust ventilation is required. The exhaust gases should be filtered or treate otherwise. For personal protection in this situation, see section 8.
		For its use as a pesticide, first look for precautions and personal protection measures on the officially approved label on the packagin 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.
		Do not discharge to the environment. Do not contaminate water who 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.
	tions for safe storage, ing 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 w 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, fee and seed should not be present. A hand wash station should be available.
7.3. Specifi	c 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 the regulatory authorities.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. **Control parameters** Personal exposure limits To our knowledge, not established for clomazone. However, personal



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			exposure limits defined by local regulations may exist and must be observed.
		aquatic environment	Not established EFSA has established an AOEL of 0.133 mg/kg bw/day 0.22 mg/l
8.2.	Exposu	re controls	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 non- hazardous 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.
		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.
		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.
		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 physical and chemical properties Appearance Odour

Light beige liquid Slight, of aromatic hydrocarbons



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0.1			
	threshold	Not determined	
	a point/fuccoring point	1% dispersion in water: 8.87 Not determined	
	g point/freezing point boiling point and boiling range	Not determined	
	boint point and boining range	$> 79^{\circ}C$	
	ration rate	Not determined	
1	ability (solid/gas)	Not determined Not applicable (liquid)	
	lower flammability or	Not applicable (liquid)	
	ive limits	Not determined	
	r pressure	Clomazone : 1.92×10^{-2} Pa at 25°C	
	r density	Not determined	
	ve density	1.171 at 20°C	
	lity(ies)	Organic solvents tend to extract the active ingredient from the	
	• • •	capsules.	
		Clomazone is soluble in acetone, acetonitrile, chloroform,	
		cyclohexanone, dichloromethane, methanol, toluene, heptane,	
		dimethylformamide.	
		Solubility of clomazone in water: 1100 mg/l	
	on coefficient n-octanol/water	Clomazone : $\log K_{ow} = 2.5$	
	nition temperature	392°C	
	position temperature	Not determined	
	ity	115 - 746 mPa.s at 20°C	
	ive properties	Not explosive	
Oxidis	ing properties	Not oxidising	
9.2. Other	information		
	ility	The product is dispersible in water.	
	5	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
SECTION 1): STABILITY AND REACTI	VITY	
10.1. React	vity	To our knowledge, the product has no special reactivities.	
10.2. Chem	ical stability	The product is stable during normal handling and storage at ambient	

- 10.3. **Possibility of hazardous reactions** None known.
- 10.4. **Conditions to avoid** Heating of the product will evolve harmful and irritant vapours.
- 10.5. Incompatible materials None known.
- 10.6. Hazardous decomposition products See subsection 5.2.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1.	Information on toxicological effects	* = Based on available data, the classification criteria are not met.
	<u>Product</u> Acute toxicity	The product is not considered as harmful by single exposures. * The acute toxicity is measured as:



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Route(s	s) of entry - ingestion	LD ₅₀ , oral, rat: > 5000 mg/kg (method OECD 401)	
	- skin	LD_{50} , dermal, rat: > 5000 mg/kg (method OECD 402)	
	- inhalation	LC_{50} , inhalation, rat: > 5.21 mg/l/4 h (method OECD 403)	
Skin co	rrosion/irritation	Not irritating to skin (method OECD 404). *	
Serious	eye damage/irritation	Not irritating to eyes (method OECD 405). *	
Respira	tory or skin sensitisation	Not sensitising (method OECD 429). *	
Germ c	ell mutagenicity	The product contains no ingredients known to be mutagenic. *	
Carcinogenicity		The product contains no ingredients known to be carcinogenic. *	
Reproductive toxicity		The product contains no ingredients 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 has been measured on the active ingredient clomazone. Target organ: liver LOAEL: 4000 ppm (400 mg/kg bw/day) in a 90-day rat study (metho OECD 408). At this dose level, increased liver weight and increased cholesterol were seen. *	
Aspirat	ion hazard	The product does not present an aspiration hazard. *	
Symptoms and effects, acute and delayed		When fed to animals, the active ingredient in this product caused decreased activity, tearing eyes, bleeding from the nose and incoordination.	

<u>Clomazone</u>

This formulation contains **microencapsulated clomazone**. The toxicity of encapsulated clomazone is lower than that of clomazone itself. It approaches the toxicity of clomazone only in cases where grinding actions break up the capsules, thus freeing the active ingredient.

Toxicokinetics, metabolism and distribution		Clomazone is rapidly absorbed and excreted. It is widely distributed in the body and almost completely metabolised. There is no evidence of accumulation.
Acute toxicity		Clomazone is harmful by ingestion. The acute toxicity is measured as:
Route(s) of entry	- ingestion	LD ₅₀ , oral, rat (female): 768 mg/kg (method OECD 425)
	- skin	LD ₅₀ , dermal, rat: $> 2000 \text{ mg/kg}$ (method OECD 402) *
	- inhalation	LC_{50} , inhalation, rat: > 5.02 mg/l/4 h (method OECD 403) *
Skin corrosion/irritation		Slightly irritating to skin (method OECD 404). *
Serious eye damage/irritation		Slightly irritating to eyes (method OECD 405). *



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Respiratory or skin sensitisation	Not a skin sensitizer (method OECD 429). *
<u>Sodium nitrate</u> Toxicokinetics, metabolism and distribution	Sodium in ionic form is a normal body constituent and regulated between narrow ranges. These ranges will not be exceeded, except locally in unusual situations such as accidents. Nitrate ion is expected to be absorbed and widely distributed in the body.
Acute toxicity	The substance is not considered as harmful. * The acute toxicity is measured as:
Route(s) of entry - ingestion	LD ₅₀ , oral, rat: 3430 mg/kg (method OECD 401)
- skin	LD ₅₀ , dermal, rat: > 5000 mg/kg (measured on s similar substance, method OECD 402)
- inhalation	LC50, inhalation, rat: not available
Skin corrosion/irritation	Not irritating to skin (measured on a similar product; method OECD 404). *
Serious eye damage/irritation	Irritating to eyes (method OECD 405).
Respiratory or skin sensitisation	Did not cause sensitisation (method OECD 429). *
<u>Lignosulfonic acid, sodium salt, su</u> Acute toxicity	<i>lfomethylated</i> The substance is not considered as harmful by single exposure. *
Route(s) of entry - ingestion	LD ₅₀ , oral, rat: not available
- skin	LD ₅₀ , dermal, rat: not available
- inhalation	LC ₅₀ , inhalation, rat: not available
Serious eye damage/irritation	Causes serious eye irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. **Toxicity** The product is a herbicide and must therefore be expected to be harmful to all plants. It is considered as non-toxic to algae, daphnids, fish, soil micro- and macroorganisms, birds and insects.

The ecotoxicity measured on the product is:

- Fish	Rainbow trout (Oncorhynchus mykiss)	96-h LC ₅₀ : 593 mg/l
- Invertebrates	Daphnids (Daphnia magna)	48-h EC ₅₀ : 491 mg/l
- Algae	Green algae (Pseudokirneriella subcapitata)	72-h E _r C ₅₀ : 366 mg/l
- Plants	Duckweed (Lemna gibba)	7-day ErC50: 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



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		weeks to a few months in aerobic soil a microbiologically. The product contains minor amounts o components, which may not be degrad	f not readily biodegradable
		plants.	
12.3. Bioacc	umulative potential	See section 9 for octanol-water partitio	on coefficient.
		Clomazone has a low potential to bioa bioaccumulation factor of clomazone is	
12.4. Mobili	ty in soil	Under normal conditions clomazone is	s of moderate mobility in soil.
	s of PBT and vPvB nent	None of the ingredients meets the crite	ria for being PBT or vPvB.
12.6. Other	adverse effects	Other relevant hazardous effects in the	environment are not known.
SECTION 13	: DISPOSAL CONSIDERAT	TIONS	
13.1. Waste treatment methods Remaining quantities of the material and empty but und should be regarded as hazardous waste.			
Disposal of waste and packagings must always be in accord all applicable local regulations.		t always be in accordance with	
Disposal of product		According to the Waste Framework Di possibilities for reuse or reprocessing s is not feasible, the material can be disp licensed chemical destruction plant or flue gas scrubbing.	should first be considered. If this posed of by removal to a
		Do not contaminate water, foodstuffs, a disposal. Do not discharge to sewer system	
Disposal of packaging		 It is recommended to consider possible following order: 1. Reuse or recycling should first be consecutive by the authorisation holder. If o must be emptied and triply rinsed (or erinsing water to sewer systems. 2. Controlled incineration with flue gas combustible packaging materials. 3. Delivery of the packaging to a license hazardous waste. 4. Disposal in a landfill or burning in or last resort. For disposal in a landfill, consecutive completely, rinsed and punctured to margurposes. If burned, stay out of smoke. 	onsidered. Reuse is prohibited offered for recycling, containers equivalent). Do not discharge as scrubbing is possible for sed service for disposal of open air should only occur as a ontainers should be emptied ake them unusable for other



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SECTION 14: TRANSPORT INFORMATION

ADR/RID/IMDG/IATA/ICAO classification

<u>hDividD/mbO/mmTeree cassification</u>			
UN number	Not classified as hazardous material for transport		
UN proper shipping name	Not applicable		
Transport hazard class(es)	Not applicable		
Packing group	Not applicable		
Environmental hazards	May be hazardous in the environment		
Special precautions for user	Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not discharge to the environment.		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	The product is not transported in bulk by ship.		
FION 15: REGULATORY INFORMA	TION		
Safety, health and environmental regulations/legislation specific for the substance or mixture	To our knowledge, no specific regulations apply.		
Chemical safety assessment	A chemical safety assessment is not required to be included for this product.		
ECTION 16: OTHER INFORMATION	I		
Relevant changes in the safety data sheet	Minor corrections only.		
List of abbreviations	AOEL Acceptable Operator Exposure Level		
	UN number		

IUPAC LC_{50}

50% Lethal Concentration



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		LD ₅₀ LOAEL MARPOI OECD PBT PNEC Reg. STOT vPvB WHO	50% Lethal Dose Lowest Observed Adverse Effect Level Set of rules from the International Maritime Organisation (IMO) for prevention of sea pollution Organisation for Economic Cooperation and Development Persistent, Bioaccumulative, Toxic Predicted No Effect Concentration Regulation Specific Target Organ Toxicity very Persistent, very Bioaccumulative World Health Organisation
References			sured on the product are unpublished company data. Data or ts are available from published literature and can be found aces.
Method	l for classification	Test data	
Used hazard statements		H272 H301 H302 H319 H332 H400 H410 EUH210 EUH401	May intensify fire; oxidiser. Toxic if swallowed. Harmful if swallowed. Causes serious eye irritation. Harmful if inhaled. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Safety data sheet available on request. To avoid risks to human health and the environment, comply with the instructions of use.
Advice on training			rial should only be used by persons who are made aware of ous properties and have been instructed in the required cautions.

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