

Specification No.	50001285	Page 1 of 14
Product name	1551, GAMMA-CYHALOTHRIN 150 g/l CS	September 2021
Safety data sheet according to EU Reg. 1907/2006 as amended		Supersedes October 2015

SAFETY DATA SHEET

1551, GAMMA-CYHALOTHRIN 150 g/l CS

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** **1551, Gamma-cyhalothrin 150 g/l CS**
Contains gamma-cyhalothrin and 1,2-benzisothiazol-3(2H)-one
- 1.2. **Relevant identified uses of the substance or mixture and uses advised against** Can be used as insecticide only.
- 1.3. **Details of the supplier of the safety data sheet** CHEMINOVA A/S, a subsidiary of FMC Corporation
Thyborønvej 78
DK-7673 Harboøre
Denmark
- 1.4. **Emergency telephone number** ... For leak, fire, spill or accident emergencies, call:
Denmark: 45-69918573 (CHEMTREC)
Medical emergency - Denmark: +45 82 12 12 12




♣ SECTION 2: HAZARDS IDENTIFICATION

- 2.1. **Classification of the substance or mixture** Acute inhalation toxicity: Category 4 (H332)
Sensitisation – skin: Category 1B (H317)
Specific target organ toxicity – repeated exposure: Category 1 (H372)
Hazards to the aquatic environment, acute: Category 1 (H400)
chronic: Category 1 (H410)
- WHO classification** Class III: Slightly hazardous
- Health hazards** The product is harmful by inhalation. It may cause hypersensitivity by skin contact in certain individuals. Chronic exposure may cause functional changes in the central and peripheral nervous systems (see section 11).
- Gamma-cyhalothrin** is very toxic by inhalation and toxic if swallowed. In this formulation it is present in microencapsulated form, which will lower its toxicity, but inhalation of spray or mist must be avoided.
- Environmental hazards** The product is very toxic to aquatic organisms.

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2.2. Label elements

According to EU Reg. 1272/2008 as amended

Product identifier	1551, Gamma-cyhalothrin 150 g/l CS Contains gamma-cyhalothrin and 1,2-benzisothiazol-3(2H)-one
Hazard pictograms (GHS07, GHS08, GHS09)	  
Signal word	Danger
Hazard statements	
H332	Harmful if inhaled.
H317	May cause an allergic skin reaction.
H372	Causes damage to nervous system through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Supplementary hazard statement	
EUH401	To avoid risks to human health and the environment, comply with the instructions of use.
Precautionary statements	
P261	Avoid breathing vapours.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/container as hazardous waste.
2.3. Other hazards	None of the ingredients in the product meets the criteria for being PBT or vPvB.

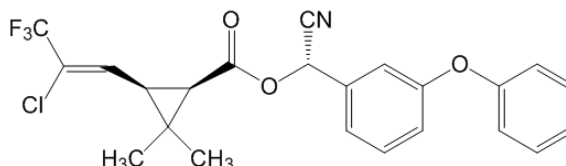
♣ SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances	The product is a mixture, not a substance.
3.2. Mixtures	See section 16 for full text of hazard statements.
	The product is a suspension in water of porous microcapsules containing the active ingredient gamma-cyhalothrin.
<i>Active ingredient</i>	
Gamma-cyhalothrin	Content: 14% by weight
CAS name	Cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl, cyano(3-phenoxyphenyl)methyl ester, [1R-[1α(S*),3α(Z)]]-
CAS no.	76703-62-3
IUPAC name	(S)-α-Cyano-3-phenoxybenzyl (Z)-(1R,3R)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate
ISO name/EU name	Gamma-cyhalothrin
EC no. (EINECS no.)	None
EU index no.	None
Classification of the ingredient	Acute oral toxicity: Category 3 (H301)

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Acute dermal toxicity: Category 4 (H312)
 Acute inhalation toxicity: Category 1 (H330)
 Sensitisation – skin: Category 1A (H317)
 STOT – repeated exposure: Category 1 (H372)
 Hazards to the aquatic environment, acute: Category 1 (H400)
 chronic: Category 1 (H410)

Structural formula



Reportable ingredients

	Content (% w/w)	CAS no.	EC no. EINECS no.	Classification
Hydrocarbons, C10-C13, aromatics, < 1% naphthalene Reg. no. 01-2119451097-39	12		922-153-0	Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)
Alcohols, C11-15-secondary, ethoxylated	1	68131-40-8	None	Skin Irrit. 2 (H315) Eye Dam. 1 (H318)
1,2-Benzisothiazol-3(2H)-one	max. 0.03	2634-33-5	220-120-9	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1A (H317) Aquatic Acute 1 (H400)

♣ SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

If exposure has occurred, do not wait for symptoms to develop, but immediately start the procedures described below.

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.

If breathing has stopped, immediately start artificial respiration and maintain until a physician takes charge of the exposed person.

Skin contact

Immediately remove contaminated clothing and footwear. Do not start with flushing with water, but wipe off with dry cloth or using talcum powder, followed by washing with water and soap. Thereafter apply lidocaine, vitamin E cream or fatty skin care oil or cream. See physician if contamination is severe or if feeling unwell.

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. See physician immediately.

Ingestion

Let the exposed person rinse mouth with water and let him/her drink 1 or 2 glasses of water (not milk or cream or other substance containing fats, which may enhance absorption), but do not induce vomiting. If vomiting does occur, let him/her rinse mouth and drink

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water again. Never give anything by mouth to an unconscious person. Get medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Gamma-cyhalothrin can cause feelings of burning, tingling or numbness in exposed areas (paraesthesia).

4.3. Indication of any immediate medical attention and special treatment needed

If any sign of poisoning occurs, call a doctor (physician), clinic or hospital immediately. Explain that the victim has been exposed to a pyrethroid insecticide. Describe his/her condition and the extent of exposure. Immediately remove the exposed person from the area where the product is present.

As soon as a feeling of tingling is noted in any skin area (see section 11), it is recommended to immediately apply lidocaine or a vitamin E cream. For this purpose lidocaine or vitamin E cream should be available at the workplace.

It may be helpful to show this safety data sheet to physician.

Notes to physician

A specific antidote against this substance is not known. Gastric lavage and administration of activated charcoal can be considered. After decontamination, treatment is symptomatic and supportive as indicated. Normally recovery is spontaneous.

If allowed to penetrate the skin, **gamma-cyhalothrin** may cause an irritation similar to sunburn. The substance will be drawn into a non-polar environment such as a fat based oil or cream. Vitamin E cream has been reported to be beneficial. Water is highly polar and will not decrease, but may prolong the irritation. Hot water may increase the pain.

For eye contamination, instillation of local anaesthetic can be considered.

♣ 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, toxic, irritant and inflammable compounds such as nitrogen oxides, hydrogen chloride, hydrogen fluoride, carbon monoxide, carbon dioxide and various chlorinated and fluorinated organic compounds. Traces of hydrogen cyanide may be present.

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.

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♣ SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

It is recommended to have a plan for the avoidance of spills. If spillage does occur, it has to be removed and the area cleaned immediately according to a predetermined plan. It is recommended to clean area or equipment also if contamination is suspected.

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. Avoid and reduce vapour and 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, attapulgate, bentonite or other absorbent clays. Collect the contaminated absorbent in suitable containers. Clean area with much water and industrial detergent. 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.

Area or equipment can be cleaned with water/isopropanol mixture (25/75) under alkaline conditions (pH > 12). Personal protection equipment must also be used when cleaning.

6.4. Reference to other sections

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

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SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

In an industrial environment it is important to avoid all personal contact with the product, if possible by using closed systems with remote system control. Otherwise, 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. 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 packaging or for other official guidance or policy in force. If these are lacking, see section 8.

Keep all unprotected persons and children away from working area.

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.

The work area should always be kept clean. Used personal protection equipment should either be thrown out or be cleaned immediately after use. Respirator should be cleaned and filter replaced according to instructions provided with respirator.

Do not discharge to the environment. 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 is stable under normal conditions of warehouse storage. Protect against extremes of heat and cold. The product should not be allowed to dry out.

Keep in tightly 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.

Storage of mixtures of the product with other products can increase toxicity because of extraction of the active ingredient from the capsules.

7.3. Specific end use(s)

This product is a registered pesticide and may only be used for officially allowed applications in accordance with a label approved by the regulatory authorities.

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Personal exposure limits

To our knowledge, no exposure limits have been established for gamma-cyhalothrin. An internal value of 0.02 mg/m³ (8-hr LTEL-TWA) is recommended by the manufacturer.

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

Gamma-cyhalothrin

DNEL, systemic

0.034 mg/kg bw/dag

PNEC, aquatic environment

0.044 ng/l

8.2. Exposure 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.



Respiratory protection

The product does not automatically present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material which produces a heavy vapour or mist, workers should put on officially approved respiratory protection equipment with a universal filter type including particle filter.



Protective gloves

Wear long chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber. The breakthrough times of these materials for gamma-cyhalothrin are unknown. Generally, however, the use of protective gloves will give only partial protection against dermal exposure. Small tears in the gloves and cross-contamination can easily occur. It is recommended to limit the work to be done manually and to change the gloves immediately if there is a suspicion of contamination. Be careful not to touch anything with contaminated gloves. Used gloves should be thrown out and not be reused. Wash hands with water and soap immediately after work is finished.



Eye protection

Wear face shield rather than goggles or safety glasses. The possibility of eye contact should be excluded.



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 short 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 appreciable or prolonged exposure, coveralls of barrier laminate may be required.

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♣ SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on physical and chemical properties

Appearance	Off-white liquid
Odour	Aromatic
Odour threshold	Not determined
pH	Undiluted: 4.5 - 5.0
Melting point/freezing point	Below 0°C
Initial boiling point and boiling range	Not applicable (decomposes)
Flash point	> 100°C (Pensky-Martens closed cup)
Evaporation rate	Not determined
Flammability (solid/gas)	Not applicable (liquid)
Upper/lower flammability or explosive limits	Not determined
Vapour pressure	Gamma-cyhalothrin : 1.03×10^{-7} Pa at 20°C 3.45×10^{-7} Pa at 25°C
Vapour density	Not determined
Relative density	Not determined
Solubility(ies)	Density: 1.04 g/ml at 20°C Solubility of gamma-cyhalothrin at 19°C in: ethyl acetate > 500 g/l heptane 30.7 g/l water 0.0021 mg/l at 20°C Some solvents favour the extraction of the active ingredient from the capsules.
Partition coefficient n-octanol/water	Gamma-cyhalothrin : $\log K_{ow} = 5.2$ at 25°C
Autoignition temperature	None below 400°C (the product is a suspension in water)
Decomposition temperature	Not determined
Viscosity	The product has high viscosity. It is a non-newtonian fluid; viscosity decreases with increasing shear rate. Shear rate 0.01 s^{-1} : $> 3 \times 10^4$ mPa.s Shear rate 100 s^{-1} : 80 - 120 mPa.s
Explosive properties.....	Not explosive
Oxidising properties	Not oxidising

9.2. Other information

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

10.1. Reactivity	To our knowledge, the product has no special reactivities.
10.2. Chemical stability	Gamma-cyhalothrin decomposes on heating. Direct local heating such as electric heating or by steam must be avoided.
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	May react with oxidising agents.
10.6. Hazardous decomposition products	See subsection 5.2.

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♣ SECTION 11: TOXICOLOGICAL INFORMATION

11.1. **Information on toxicological effects** * = Based on available data, the classification criteria are not met.

Product

Acute toxicity	The product is harmful by inhalation, but is not considered as harmful by ingestion or skin contact. The acute toxicity as measured on a similar product is:
Route(s) of entry - ingestion	LD ₅₀ , oral, rat (male): 2250 mg/kg (method OECD 401) *
- skin	LD ₅₀ , dermal, rat: > 5000 mg/kg (method OECD 402) *
- inhalation	LC ₅₀ , inhalation, rat (female): 2.54 mg/l/4 h (method OECD 403) LC ₅₀ , inhalation, rat (male): > 2.72 mg/l/4 h
Skin corrosion/irritation	Slightly irritating to skin (measured on a similar product; method OECD 404). *
Serious eye damage/irritation	Mildly to moderately irritating to eyes (measured on a similar product; method OECD 405). *
Respiratory or skin sensitisation ...	Sensitising (measured on a similar product; method OECD 406).
Germ cell mutagenicity	The product does not contain any ingredient found to be mutagenic. *
Carcinogenicity	The product does not contain any ingredient found to be carcinogenic. *
Reproductive toxicity	The product does not contain any 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 the active ingredient gamma-cyhalothrin: Target organ: nervous system. Repeated exposure may cause neurotoxic effects. Changes of behaviour were seen in animal tests at exposure levels of 6 - 8 mg/kg bw/day (method OECD 408). *
Aspiration hazard	The product does not present an aspiration pneumonia hazard.
Symptoms and effects, acute and delayed	On contact, gamma-cyhalothrin can cause feelings of burning, tingling or numbness in exposed areas (paraesthesia), which is harmless at low exposure, but can be quite painful, especially in the eye. The effect may result from splash, aerosol or transfer from contaminated gloves. The effect is transient, lasting up to 24 hours, but may in exceptional cases last longer. It may be considered as a warning that overexposure has occurred and that work practice should be reviewed.

Gamma-cyhalothrin

Toxicokinetics, metabolism and distribution	Gamma-cyhalothrin is rapidly absorbed following ingestion. It is extensively metabolised. An elimination half-life of 23 days is
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reported from animal tests. Accumulation in fat is possible.

Acute toxicity		Gamma-cyhalothrin is very toxic by inhalation and toxic if swallowed. Toxicity by skin contact is less severe. The acute toxicity is measured as:
Route(s) of entry	- ingestion	LD ₅₀ , oral, rat (male): > 50 mg/kg (method OECD 401)
		LD ₅₀ , oral, rat (female): approx. 55 mg/kg
	- skin	LD ₅₀ , dermal, rat (female): approx. 1650 mg/kg (method OECD 402)
	- inhalation	LC ₅₀ , inhalation, rat (female): 0.03 mg/l/4 h (method OECD 403)
Skin corrosion/irritation		Mildly irritating to skin (method OECD 404). *
Serious eye damage/irritation		Not irritating to eyes (method OECD 405). *
Respiratory or skin sensitisation ...		Weakly sensitising (method OECD 406).

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

Acute toxicity		The substance is not considered as harmful. * The acute toxicity as 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.

Alcohols, C11-15-secondary, ethoxylated

Acute toxicity		The substance is not considered as harmful. * The acute toxicity is:
Route(s) of entry	- ingestion	LD ₅₀ , oral, rat: > 2000 mg/kg
	- skin	LD ₅₀ , dermal, rabbit: > 2000 mg/kg
	- inhalation	LC ₅₀ , inhalation, rat: not available
Skin corrosion/irritation		Prolonged or repeated exposure may cause skin irritation.
Serious eye damage/irritation		May cause pain disproportionate to the level of irritation to eye tissues. May cause severe irritation with corneal injury.

1,2-Benzisothiazol-3(2H)-one

Acute toxicity		The substance is harmful by ingestion.
Route(s) of entry	- ingestion	LD ₅₀ , oral, rat (male): 670 mg/kg

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	LD ₅₀ , oral, rat (female): 784 mg/kg (method OPPTS 870.1100, measured on 73% solution)
- skin	LD ₅₀ , dermal, rat: > 2000 mg/kg * (method OPPTS 870.1200, measured on 73% solution)
- inhalation	LC ₅₀ , inhalation, rat: not available
Skin corrosion/irritation	Slightly irritating to skin (method OPPTS 870.2500).
Serious eye damage/irritation	Severely irritating to eyes (method OPPTS 870.2400).
Respiratory or skin sensitisation ...	Moderate dermal sensitizer to guinea pigs (method OPPTS 870.2600). The substance appears to be significantly more sensitising to humans.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity	The product is extremely toxic to fish, aquatic invertebrates and insects. It is not considered as harmful to aquatic plants, soil micro- and macroorganisms and birds.
The ecotoxicity of the product as measured on a similar product is:	
- Fish	Rainbow trout (<i>Oncorhynchus mykiss</i> Walbaum) 96-h LC ₅₀ : 9.19 µg/l
- Invertebrates	Daphnids (<i>Daphnia magna</i> Straus) 48-h LC ₅₀ : 2.45 µg/l
- Algae	Green algae (<i>Selenastrum capricornutum</i> Printz) 72-h IC ₅₀ : 317 mg/l
- Earthworms	<i>Eisenia foetida foetida</i> 14-day LC ₅₀ : > 1000 mg/kg dry soil
- Birds	Bobwhite quail (<i>Colinus virginianus</i>) LD ₅₀ : > 2000 mg/kg
- Insects	Bees (<i>Apis mellifera</i>) 48-h LD ₅₀ , contact: 0.03 µg/bee 48-h LD ₅₀ , oral: 1.26 µg/bee
12.2. Persistence and degradability	Gamma-cyhalothrin is not readily biodegradable. Its primary half-life in soil is measured to be 4 - 8 weeks depending on circumstances. It is not toxic to microorganisms in waste water treatment plants, but it is degraded only slowly. The product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.
12.3. Bioaccumulative potential	See section 9 for octanol-water partition coefficient. Gamma-cyhalothrin has the potential to bioaccumulate, but in view of its high acute toxicity to aquatic organisms, bioaccumulation is not relevant.
12.4. Mobility in soil	Gamma-cyhalothrin is not mobile in soil.
12.5. Results of PBT and vPvB assessment	None of the ingredients meets the criteria for being PBT or vPvB.
12.6. Other adverse effects	Other relevant hazardous effects in the environment are not known.

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♣ 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 feasible, the material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.
- Disposal of packaging Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.
- 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 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. (microencapsulated gamma-cyhalothrin)
- 14.3. **Transport hazard class(es)** 9
- 14.4. **Packing group** III
- 14.5. **Environmental hazards** Marine pollutant
- 14.6. **Special precautions for user** 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 should not be transported by ship as a bulk liquid.

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♣ SECTION 15: REGULATORY INFORMATION

- 15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture** Seveso category in Annex I to 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	CAS	Chemical Abstracts Service
	CS	Capsule Suspension
	Dir.	Directive
	DNEL	Derived No Effect Level
	EINECS	European INventory of Existing Commercial Chemical Substances
	GHS	Globally Harmonized classification and labelling System of chemicals, Fifth revised edition 2013
	IBC	International Bulk Chemical code
	IC ₅₀	50% Inhibition Concentration
	ISO	International Organisation for Standardization
	IUPAC	International Union of Pure and Applied Chemistry
	LC ₅₀	50% Lethal Concentration
	LD ₅₀	50% Lethal Dose
	LTEL-TWA:	Long-Term Exposure Limit - Time Weighted Average
	MARPOL	Set of rules from the International Maritime Organisation (IMO) for prevention of sea pollution
	N.o.s.	Not otherwise specified
	OECD	Organisation for Economic Cooperation and Development
	OPPTS	Office of Prevention, Pesticides & Toxic Substances
	PBT	Persistent, Bioaccumulative, Toxic
	PNEC	Predicted No Effect Concentration
	Reg.	Regulation
	STOT	Specific Target Organ Toxicity
	vPvB	very Persistent, very Bioaccumulative
	WHO	World Health Organisation
References	Data measured on a similar product are unpublished company data. Data on ingredients are available from published literature and can be found several places.	
Method for classification	Read-across	
Used hazard statements	H301	Toxic if swallowed.
	H302	Harmful if swallowed.
	H304	May be fatal if swallowed and enters airways.
	H312	Harmful in contact with skin.

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- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H372 Causes damage to nervous system 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.
- 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 Cheminova A/S may exist. The user has to check the validity of the information under local circumstances.

Prepared by: Cheminova A/S / GHB / JFC