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Product name	Bombex Lambda 10 CS - Public Health	February 2019
Safety data sheet according to EU Reg. 1907/2006 as amended		Supersedes June 2018

SAFETY DATA SHEET

Bombex Lambda 10 CS - Public Health

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** **Bombex Lambda 10 CS - Public Health**
Contains lambda-cyhalothrin
- 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
P.O. Box 9
DK-7620 Lemvig
Denmark
SDS.Ronland@fmc.com
- Local contact (South Africa) –** **FMC Chemicals (Pty) Ltd**
Pegasus Building 1, Floor 2
210 Amarand Ave
Menlyn
Pretoria, 0181
South Africa
- Emergency telephone number -** **For any emergency or poisoning contact:**
Griffon Poison Information Centre (24 hrs)
+27-(0)-82-446-8946
- For fire, leak, spill or other accident emergencies**
+1 703 / 527 3887 (CHEMTREC - Collect)

♣ SECTION 2: HAZARDS IDENTIFICATION

- 2.1. **Classification of the substance or mixture** Acute oral toxicity: Category 4 (H302)
Acute inhalation toxicity: Category 4 (H332)
Sensitisation – skin: Category 1 (H317)
Hazards to the aquatic environment, acute: Category 1 (H400)
chronic: Category 1 (H410)
- WHO classification Class II, moderately hazardous
- Health hazards The product is harmful by ingestion and inhalation. It may cause allergic skin sensitisation.

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Lambda-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.

2.2. Label elements

According to EU Reg. 1272/2008 as amended

Product identifier Bombex[®] Lambda 10 CS - Public Health
Contains lambda-cyhalothrin

Hazard pictograms (GHS07, GHS09)



Signal word Warning

Hazard statements

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H332 Harmful if inhaled.
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 of porous microcapsules which contain the active ingredient lambda-cyhalothrin.

Active ingredient

Lambda-cyhalothrin Content: 10% by weight
CAS name Cyclopropanecarboxylic acid, 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethyl-, cyano(3-phenoxyphenyl)methyl ester, [1 α (S*),3 α (Z)]-(±)-
CAS no. 91465-08-6

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IUPAC name(s) Equal amounts of (*S*)- α -cyano-3-phenoxybenzyl (*Z*)-(1*R*,3*R*)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropane-carboxylate and (*R*)- α -cyano-3-phenoxybenzyl (*Z*)-(1*S*,3*S*)-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropane-carboxylate

ISO name/EU name Lambda-cyhalothrin

EC no. (ELINCS no.) 415-130-7

EU index no. 607-252-00-6

Classification of the ingredient Acute oral toxicity: Category 3 (H301)
Acute dermal toxicity: Category 3 (H311)
Acute inhalation toxicity: Category 2 (H330)
Hazards to the aquatic environment, acute: Category 1 (H400)
chronic: Category 1 (H410)

<u>Reportable ingredients</u>	Content (% w/w)	CAS no.	EC no.	Classification
Propane-1,2-diol Reg. no. 01-2119456809-23	10 - 30	57-55-6	EINECS no.: 200-338-0	Not classified
Hydrocarbons, C9, aromatics Reg. no. 01-2119455851-35	5 - 10		918-668-5	Flam. Liq. 3 (H226) STOT SE 3 (H335) STOT SE 3 (H336) Asp. Tox. 1 (H304) Aquatic Chronic 2 (H411)

♣ 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.
- 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. Get medical attention immediately.
- Ingestion Let the exposed person rinse mouth and let him/her drink several 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 fluids 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** Lambda-cyhalothrin can cause feelings of burning, tingling or numbness in exposed areas (paraesthesia).

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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, **lambda-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, malodorous, toxic, irritant and inflammable compounds such as carbon monoxide, carbon dioxide, hydrogen chloride, hydrogen fluoride, nitrogen oxides 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.

♣ 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):

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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.

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 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. of personal protection. See section 13 for disposal.

♣ 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.

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

Store 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.

♣ SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Personal exposure limits

No exposure limit values have been established for the active ingredient **lambda-cyhalothrin**, but care must be taken to minimise inhalation. An internal value of 0.04 mg/m³ (8-hr LTEL-TWA) is recommended by the manufacturer for lambda-cyhalothrin.

		Year	
Propane-1,2-diol	AIHA (USA) WEEL	2015	10 mg/m ³
	MAK (Germany)	2014	Cannot be established at present
	HSE (UK) WEL	2011	8-hr TWA
			10 mg/m ³ (particulates)

Aromatic hydrocarbons

100 ppm total hydrocarbon is recommended. The mixture contains trimethyl benzene. The ACGIH recommends a TLV-TWA of 25 ppm (123 g/m³) for trimethyl benzene.

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

Lambda-cyhalothrin

DNEL 0.00063 mg/kg bw/day
PNEC 0.04 ng/l

Propane-1,2-diol

DNEL, inhalation, systemic 183 mg/m³
DNEL, inhalation, local 10 mg/m³
PNEC, fresh water 260 mg/l
PNEC, marine water 26 mg/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.

In case of incidental high exposure, more personal protection equipment 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 a 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 lambda-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 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

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contaminated. In cases of appreciable 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	White liquid (suspension)
Odour	Aromatic
Odour threshold	Not determined
pH	Approx. 6.4
Melting point/freezing point	Not determined
Initial boiling point and boiling range	Not determined
Flash point	Approx. 85°C
Evaporation rate	Not determined
Flammability (solid/gas)	Not applicable (liquid)
Upper/lower flammability or explosive limits	Not determined
Vapour pressure	Lambda-cyhalothrin : 2 x 10 ⁻⁷ Pa at 20°C (by extrapolation) 2 x 10 ⁻⁴ Pa at 60°C 8 x 10 ⁻⁴ Pa at 70°C
Vapour density	Not determined
Relative density	Not determined
Solubility(ies)	Density: 1.05 g/ml at 20°C Organic solvents tend to extract the active ingredient from the capsules. Solubility of lambda-cyhalothrin at 21°C in: hexane > 500 g/l toluene > 500 g/l ethyl acetate > 500 g/l water 0.005 mg/l at 20°C and pH 6.5 Lambda-cyhalothrin : log K _{ow} = 7
Partition coefficient n-octanol/water	Lambda-cyhalothrin : log K _{ow} = 7
Autoignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Approx. 150 mPa.s at 20°C
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	Lambda-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	None known.
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 ingestion and inhalation. The acute toxicity is measured as:
Route(s) of entry	
- ingestion	LD ₅₀ , oral, rat (female): 550 mg/kg
- skin	LD ₅₀ , dermal, rat: > 5000 mg/kg *
- inhalation	LC ₅₀ , inhalation, rat: 2.04 mg/l/4 h
Skin corrosion/irritation	Slightly irritating to skin. *
Serious eye damage/irritation	Slightly irritating to eyes. *
Respiratory or skin sensitisation ...	Sensitising to skin.
Germ cell 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 other than already mentioned have been observed after single exposure. *
STOT – repeated exposure	The following has been measured on the active ingredient lambda-cyhalothrin: Target organ: nervous system. NOEL: approx. 0.7 mg/kg bw/day in a 90-day rat study based on increased liver weight and changes of hepatic chemistry.
Aspiration hazard	The product does not present an aspiration pneumonia hazard. *
Symptoms and effects, acute and delayed	On contact, lambda-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.

Lambda-cyhalothrin

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

Toxicokinetics, metabolism and distribution	Lambda-cyhalothrin is rapidly absorbed following ingestion. It is extensively metabolised. An elimination half-life of 23 days is reported from animal tests. Accumulation in fat is possible.
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Acute toxicity Lambda-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 LD₅₀, oral, rat (male): 79 mg/kg (method OECD 401)
LD₅₀, oral, rat (female): 56 mg/kg
- skin LD₅₀, dermal, rat (male): 632 mg/kg (method OECD 402)
LD₅₀, dermal, rat (female): 696 mg/kg
- inhalation LC₅₀, inhalation, rat: 0.06 mg/l/4 h (method OECD 403)

Skin corrosion/irritation Not irritating to skin (method OECD 404). *

Serious eye damage/irritation Mildly irritating to eyes (method OECD 405). *

Respiratory or skin sensitisation ... Not a skin sensitizer (method OECD 406).

Hydrocarbons, C9, aromatics

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

Route(s) of entry - ingestion LD₅₀, oral, rat: 3592 mg/kg (method similar to OECD 401)
- skin LD₅₀, dermal, rabbit: > 3160 mg/kg (method similar to OECD 402)
- inhalation LC₅₀, inhalation, rat: > 6.2 mg/l/4 h (method similar to OECD 403)

Skin corrosion/irritation Mildly irritating to skin at prolonged exposure. Can cause skin dryness (method similar to OECD 404).

Serious eye damage/irritation May cause mild, short-lasting discomfort to eyes (method similar to OECD 405). *

Respiratory or skin sensitisation ... Not expected to cause allergic reactions (method similar to OECD 406). *

Aspiration hazard Aromatic hydrocarbons present an aspiration hazard.

♣ SECTION 12: ECOLOGICAL INFORMATION

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

The ecotoxicity measured on the active ingredient lambda-cyhalothrin is:

- Fish	Rainbow trout (<i>Salmo gairdneri</i>)	96-h LC ₅₀ : 0.24 µg/l
	
	Sheepshead minnow (<i>Cyprinodon variegatus</i>)	28-day NOEC: 0.25 µg/l
	
- Invertebrates	Daphnids (<i>Daphnia magna</i>)	48-h LC ₅₀ : 0.36 µg/l
	
		21-day NOEC: 2.0 ng/l
- Algae	Green algae (<i>Selenastrum capricornutum</i>)	96-h EC ₅₀ : > 0.3 mg/l
	

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- Earthworms *Eisenia foetida* 14-day LC₅₀: > 1000 mg/kg soil
- Birds Mallard duck (*Anas platyrhynchos*) LD₅₀: > 3950 mg/kg
- Insects Bees (*Apis mellifera*) 48-h LC₅₀, contact: 38 ng/bee
48-h LC₅₀, oral: 909 ng/bee

- 12.2. **Persistence and degradability** **Lambda-cyhalothrin** is not readily biodegradable. Its primary half-life in soil is measured to be approx. 30 to 100 days 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.
- Lambda-cyhalothrin** has the potential to bioaccumulate. However, the risk of bioaccumulation is low, because the substance has a very low solubility in water and is rapidly removed from the water phase. Therefore, bioavailability is low. Moreover, in view of its high acute toxicity to aquatic organisms, bioaccumulation is not relevant.
- 12.4. **Mobility in soil** **Lambda-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.

♣ 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.
- Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewerage 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.

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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

- | | | |
|-------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| 14.1. | UN number | 3082 |
| 14.2. | UN proper shipping name | Environmentally hazardous substance, liquid, n.o.s. (lambda-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 | Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not discharge to the environment. |
| 14.7. | Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code | The product is not transported in bulk by ship. |

♣ SECTION 15: REGULATORY INFORMATION

- | | | |
|-------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15.1. | Safety, health and environmental 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 this product. |
| 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 | Numerous changes have been made to adapt the format of the safety data sheet, but these do not concern new information on hazardous properties. |
| List of abbreviations | ACGIH American Conference of Governmental Industrial Hygienists
AIHA American Industrial Hygiene Association
CAS Chemical Abstracts Service
CS Capsule Suspension
Dir. Directive
DNEL Derived No Effect Level
EC European Community
EC ₅₀ 50% Effect Concentration
EINECS European INventory of Existing Commercial Chemical Substances
ELINCS European LIst of Notified Chemical Substances |

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GHS	Globally Harmonized classification and labelling System of chemicals, Fifth revised edition 2013
HSE	Health & Safety Executive (UK)
IBC	International Bulk Chemical code
ISO	International Organisation for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	50% Lethal Concentration
LD ₅₀	50% Lethal Dose
LTEL	Long-term exposure limit
MAK	Maximale Arbeitsplatz-Konzentration
MARPOL	Set of rules from the International Maritime Organisation (IMO) for prevention of sea pollution
NOEC	No Observed Effect Concentration
NOEL	No Observed Effect Level
n.o.s.	Not otherwise specified
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent, Bioaccumulative, Toxic
PNEC	Predicted No Effect Concentration
Reg.	Regulation
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TWA	Time Weighted Average
vPvB	very Persistent, very Bioaccumulative
WEEL	Workplace Environmental Exposure Level
WEL	Workplace Exposure Limit
WHO	World Health Organisation

References	Data measured on the product are unpublished company data. Data on ingredients are available from published literature and can be found several places.
Method for classification	Acute oral toxicity: test data Acute inhalation toxicity: test data Sensitisation – skin: test dataa Hazards to the aquatic environment, acute: calculation rules
Used hazard statements	H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H311 Toxic in contact with skin H317 May cause an allergic skin reaction. H330 Fatal if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. 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.

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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 Corporation / Cheminova A/S / GHB