



SAFETY DATA SHEET

CICHLOR 300 EC

Revision Date: 30.03.2016

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

Product identifiers

Product name: Cichlor 300 EC
Chemical name: Chlorpyrifos + cypermethrin
CAS No.: 2921-88-2 and 52315-07-8

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

Identified uses: Insecticide for agricultural use

Details of the supplier of the safety data sheet

Supplier: Hallmark Chemicals bv
Wilhelminakade 91
3072 AP Rotterdam
The Netherlands
Email: info@hallmarkchem.com

Emergency telephone number

Tel: +31 10 414 42 77

SECTION 2: HAZARDS IDENTIFICATION

Acute Tox. 3
Asp. Tox. 1
Skin Irrit. 2
Flam. Liq. 3
Aquatic acute 1
Aq chronic 1

Classification and Label Elements:



Pictogram(s):

Signal word: **Danger**

Hazard statement(s): **H301:** Toxic if swallowed
H304: May be fatal if swallowed and enter airways
H315: Causes skin irritation
H319: Causes serious eye irritation
H226: Flammable liquid and vapour
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H410: Very toxic to aquatic life with long lasting effects

Precautionary statement(s): **P210:** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking



P260: Do not breathe fumes/mist/vapours/ spray
P273: Avoid release to the environment
P280: Wear protective gloves/protective clothing/eye protection/face protection
P284: Wear respiratory protection
P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE/doctor

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Name	g/litre	CAS N°	Signal Word	H-statements
Chlorpyrifos	200	2921-88-2	Danger	H301, H400, H410
Cypermethrin	100	52315-07-8	Danger	H301, H335, H373, H400, H410
Surfactant	<100	-	Warning	H315, H318, H226, H335, H336
Aromatic solvent	>500	-	Danger	H226, H304, H335, H336, H411

See Sections 2 and 16 for full H-statements.

SECTION 4: FIRST AID MEASURES

Indication of any immediate medical attention and special treatment needed

First aid may be required in case of accidental exposure, inhalation or ingestion.

If in doubt, SEEK MEDICAL ATTENTION PROMPTLY!

- Eyes:** Wash with plenty of water for 15 minutes. Consult a doctor.
- Skin:** Remove contaminated clothes and shoes. Immediately wash skin with plenty of running water and soap for at least 15 minutes and rinse with water. If irritation persists, call a doctor.
- Ingestion:** Call a doctor or take patient to an emergency centre immediately, taking label or product with you. Do not induce vomiting. Product contains solvents derived from oil. Never administer anything by mouth to an unconscious person.
- Inhalation:** Remove person from the contaminated area to fresh air. If respiration is difficult, seek a qualified person to administer artificial respiration. Keep patient warm and at rest. Seek immediate medical attention or take patient to an emergency centre.
- Note to doctor:** Decision whether or not to induce vomiting should be taken by the doctor. If a stomach wash is made an endotracheal or endo-oesophageal control is recommended. Danger of uptake into the lungs from a stomach wash must be considered. If the patient suffers burns, treat with thermic burn cream. Exposure should be monitored through cholinesterase analyses of serum and erythrocytes.
- Antidote/treatment:** Antidote for chlorpyrifos is atropine sulphate in combination with cholinesterase reactivators such as PAM or controthion is preferred. Oximes may or may not be therapeutic. If used, use them in conjunction with atropine. Product contains aromatic hydrocarbon which may produce suffocation or chemical pneumonitis if aspirated during vomiting.



Consideration should be given to gastric lavage with an endotracheal tube in place and administer deactivated charcoal. Exposure should be monitored through cholinesterase analyses of serum and erythrocytes.

In case of poisoning use antidote as soon as breathing has been restored. Myocardial irritability may increase. Do not administer sympathomimetic drugs unless absolutely necessary. Provide support symptomatic treatment.

SECTION 5: FIRE FIGHTING MEASURES

- Extinguishing media:** Foam, dry chemical dusts, CO₂. Foam systems are preferred, because large quantities of water can increase product dispersion.
- Exposure hazards:** Toxic, irritant, gases may form. Above 160°C the product can rapidly decompose. Avoid fire-fighting water entering irrigation or natural water systems.
- Advice for fire-fighters:** Evacuate personnel to safe area, upwind of fire. Wear self-contained breathing apparatus and full protective clothing must be worn. Cool tank/container with water spray. Runoff from fire control may be a pollution hazard.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Wear PPE as recommended in section 8. Avoid breathing vapours, mist or aerosol. Ensure adequate ventilation. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away.
- Environmental precautions:** Remove potential sources of heat, sparks, flame, impact, friction or electricity. Dike spills. Prevent material from entering sewers, waterways, or low areas. Warn the local water authority if water-courses become contaminated.
- Clean-up methods:** Pick up and arrange disposal without creating aerosol. Contain spill and absorb with earth, sand, clay, or other absorbent material, collect and store in sealed drums for safe disposal. Decontaminate the area and equipment by washing areas with water. Keep in suitable, closed containers for disposal. Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 7: HANDLING AND STORAGE

- Handling:** Do not breathe vapour or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wash hands before eating, drinking, smoking or using the toilet. Wash clothing after use. Remove clothing immediately if pesticide gets inside. Do not store or consume food, drink or tobacco in areas where they might become contaminated with this material. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Storage:** Store in the closed original container, in a cool, dry, well-ventilated area, away from direct sunlight. Protect from frost.



Incompatibility: Incompatible with acids.

Flammability: Not flammable under normal conditions of use. The product does not sustain combustion.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chlorpyrifos TLV / PEL: 0.2 mg/m³ 8 h TWA

Engineering controls: Use only well-ventilated areas to maintain levels below the guide limits. Some operations may require pumped or local ventilation.

Face/eye protection: Protective eyewear such as safety goggles. If exposure to vapours causes eye problems, use a full-face respirator.

Skin protection: Coveralls
Chemical resistant gloves, such as barrier laminate, butyl rubber, neoprene rubber, polyvinyl chloride (PVC), viton or nitrile rubber.
Chemical-resistant footwear plus socks.
Chemical-resistant headgear.
Chemical-resistant apron when cleaning equipment, mixing or loading.

Respiratory protection: A respirator with an organic vapour-removing cartridge with a prefilter approved for pesticides EN141 or a canister approved for pesticides SSE216, or a respirator with an organic vapour (OV) cartridge.

An eyewash fountain or appropriate alternative, and emergency shower should be provided within the immediate work area for emergency use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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| a) Appearance: | Amber liquid |
| b) Odour: | Characteristic organophosphate |
| c) Odour threshold: | None set |
| d) pH: | 5 – 6 (1% dilution) |
| e) Melting point/freezing point: | Not measured |
| f) Boiling point/boiling range: | Not measured |
| g) Flash point: | 33°C (CC) |
| h) Evaporation rate: | Not measured |
| i) Flammability (solid/gas): | Flammable liquid/vapour |
| j) Upper/lower flammability or explosive limits: | Not determined |
| k) Vapour pressure: | 1.43 mPa (25°C) (Chlorpyrifos tech.) |



	2.3 x 10 ⁻⁴ Pa (25°C) (Cypermethrin tech.)
l) Vapour density:	0.478 Pa x m ³ x mol ⁻¹ (25°C) (Chlorpyrifos tech.)
m) Relative density:	1.102 g/mL ± 0.005
n) Solubility:	Forms an emulsion in water
o) Partition coefficient:	Log P _{ow} 4.7 (pH 7, 20°C) (Chlorpyrifos tech.) Log P _{ow} 5.3 (pH 7, 20°C) (Cypermethrin tech.)
p) Auto-ignition temperature:	Not measured
q) Decomposition temperature:	>130°C
r) Viscosity:	4.12 cSt (20°C)
s) Explosive properties:	Not explosive
t) Oxidising properties:	Not an oxidiser

SECTION 10: STABILITY AND REACTIVITY

Chemical stability:	High temperature exothermic decomposition >130°C. Do not heat above 50°C.
Storage stability:	Avoid high temperatures. Store below 38°C. Decomposes exothermically at high temperatures, which can further increase temperatures and cause violent decomposition if the heat source is not eliminated. Contains petroleum-derived solvents, which will burn.
Incompatibilities:	Avoid contact with strong alkalis, acids and oxidising agents.
Dangerous decomposition:	Combustion produces hydrochloric acid, ethyl and diethyl sulphides and nitrogen oxides.
Danger of polymerisation:	Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Oral LD₅₀ rat:	50 - 300 mg/kg (GHS Cat 3)
Dermal LD₅₀ rat:	>2000 mg/kg (GHS Cat 5)
Inhalation:	A single exposure to high concentration of vapours can be dangerous, causing irritation of the respiratory tract and depression of the central nervous system. Main signs include headache, vertigo/sickness, drowsiness and lack of co-ordination
Eye irritation:	Causes serious eye irritation. Vapours can irritate the eyes.
Skin irritation:	Causes skin irritation. Prolonged or repeated contact can cause irritation, drying and scaling of skin. Can be absorbed through skin, though without adverse effects from a single exposure.
Skin sensitisation:	It is not a skin sensitiser.



WHO Toxicity Classification: II, moderately hazardous

Small quantities swallowed accidentally are unlikely to harm. Ingestion of larger quantities can cause serious damage, including death. If it is inhaled into the lungs, it can cause lung damage and death by chemical pneumonitis.

Excessive inhalation exposure can cause acetyl cholinesterase inhibition (typical O/P effect). Symptoms are headache, vertigo, lack of co-ordination, muscular contraction, trembling, nausea, abdominal cramp, diarrhoea, sweating, blurred vision, salivation, tears, excessive urination and convulsions. High doses produce slight effects on supra-renal glands. No carcinogenicity, teratogenicity, reproductive toxicity or mutagenicity is observed.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity (based on active ingredients)

Chlorpyrifos

Fish toxicity:	LC ₅₀ 96 h rainbow trout	0.0013 mg/L
Daphnia toxicity:	EC ₅₀ 48 h <i>Daphnia magna</i>	0.001 mg/L
Algal toxicity:	NOEC <i>Selenastrum capricornutum</i>	>0.4 mg/L
Avian toxicity:	Acute oral LD ₅₀ Bobwhite quail 8-Day dietary LC ₅₀ Mallard duck:	13.3 mg/kg 203 mg/kg
Bee toxicity:	Toxic to bees: Oral LD ₅₀ 48 h Contact LD ₅₀ 48 h	 0.25 µg/bee 0.059 µg/bee

Not readily biodegradable. Moderately persistent in soil but not in water. Low potential to bio-concentrate.

Cypermethrin

Fish toxicity:	LC ₅₀ 96 h rainbow trout	0.0028 mg/L
Daphnia toxicity:	EC ₅₀ 48 h <i>Daphnia magna</i>	0.003 mg/L
Algal toxicity:	NOEC <i>Pseudokirchneriella subcapitata</i>	>0.1 mg/L
Avian toxicity:	Acute oral LD ₅₀ Mallard duck 8-Day dietary LC ₅₀ Mallard duck:	>10000 mg/kg >5000 mg/kg
Bee toxicity:	Toxic to bees: Oral LD ₅₀ 48 h Contact LD ₅₀ 48 h	 0.035 µg/bee 0.02 µg/bee

Moderately persistent in soil. It degrades rapidly in water under light conditions. Certain potential to bio-accumulate.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product: Dispose of waste product through an official waste contractor.



Obtain advice from local waste regulation authority.

Contaminated packaging: Triple- or pressure-rinse containers before disposal. Add rinsings to spray tank.
Do not dispose of undiluted chemicals on-site.
Do not burn empty containers. Recycle, or return to supplier through local schemes if applicable. Disposal should be in accordance with local, state or national legislation.

SECTION 14: TRANSPORTATION INFORMATION

UN number: 3017

UN Proper Shipping Name: Organophosphorus pesticide, liquid, toxic, flammable, N.O.S. (contains chlorpyrifos, solvents)

Transport hazard class: ADR/RID: 6.1 IMDG 6.1 IATA: 6.1

Packaging group: ADR/RID: III IMDG: III IATA: III

Environmental hazard: ADR/RID: Yes IMDG: Marine pollutant: Yes IATA: Yes

SECTION 15: REGULATORY INFORMATION

No additional regulatory information required for this product.

SECTION 16: OTHER INFORMATION

Additional relevant H- statements:

These H statements are for hazardous components in the product but are not at levels that require hazard statements. They provide additional information on risks.

H318	Causes serious eye damage
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects

Time weighted average (TWA) is the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

No liability is accepted for any injury, loss, damage or cost arising directly or indirectly from the use of the product or from the use of information contained within the safety data sheet since the customer's treatment of the product is necessarily beyond our control. The supplied data are based on current knowledge and experience. This safety data sheet is intended to describe our product in terms of safety requirements. The customer should determine by appropriate trials that the product is suitable for his intended use.

Sections 9, 11 and 12 based on available EU and own data.

Self-classification of mixture

Reason for revision: update to CLP/GHS format.

Supersedes version issued Feb 2007