



## SAFETY DATA SHEET

### CHLORPYRIMARK 48% EC

Revision Date: 30.03.2016

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

##### Product identifiers

Product name: CHLORPYRIMARK 48% EC  
Chemical name: Chlorpyrifos  
CAS No.: 2921-88-2

##### 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 (SDS support)

#### 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  
**H335:** May cause respiratory irritation  
**H336:** May cause drowsiness or dizziness  
**H226:** Flammable liquid and vapour  
**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

**P304+P340:** IF INHALED: Remove person to fresh air and keep comfortable for breathing

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

| Name                    | g/litre | CAS N°    | Signal Word | H-statements                 |
|-------------------------|---------|-----------|-------------|------------------------------|
| Chlorpyrifos            | 480     | 2921-88-2 | Danger      | H301, H400, H410             |
| Aromatic solvent        | >500    | -         | Danger      | H226, H304, H335, H336, H411 |
| Other inert ingredients | <1      | -         | -           | -                            |

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. Wash contaminated clothing before re-using. Contaminated shoes should be destroyed.
- 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 covered and at rest. Call a doctor or take patient to an emergency centre.
- Note to doctor:** Product may emulsify eye fluid. Symptoms of poisoning by chlorpyrifos may include pallor, sweating, salivation, headache, dizziness, nausea, vomiting, cramps, blurred vision and slurred speech, chest discomfort, laboured breathing, nervousness, watering eyes, drooling nose, convulsions and coma.

Decision whether or not to induce vomiting should be taken by the doctor. If a stomach wash is made an endotracheal or endoesophageal control is recommended. Danger of uptake into the lungs from a stomach wash must be considered. 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.

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, CO<sub>2</sub>. Do not use water jet or spray, because large quantities of water can increase product dispersion and may cause a floating fire.

**Exposure hazards:**

Toxic, irritant, gases may form – CO<sub>x</sub>, HCl, SO<sub>x</sub>, NO<sub>x</sub>, PO<sub>x</sub>, chlorides and sulphides. Above 160°C the product can rapidly decompose. Avoid fire-fighting run-off 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. Run-off 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, mist or fumes. 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/m<sup>3</sup> 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

- |                                  |                    |
|----------------------------------|--------------------|
| a) Appearance:                   | Pale yellow liquid |
| b) Odour:                        | Aromatic solvent   |
| c) Odour threshold:              | None set           |
| d) pH:                           | neutral            |
| e) Melting point/freezing point: | Not measured       |
| f) Boiling point/boiling range:  | 167°C              |
| g) Flash point:                  | 46°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) (tech.)                                      |
| l) | Vapour density:                               | 0.478 Pa x m <sup>3</sup> x mol <sup>-1</sup> (25°C) (tech.) |
| m) | Relative density:                             | 1.08 g/mL  |
| n) | Solubility:                                   | Forms an emulsion in water                                   |
| o) | Partition coefficient:                        | Log P <sub>ow</sub> 4.7 (pH 7, 20°C) (tech.)                 |
| p) | Auto-ignition temperature:                    | 450°C  |
| q) | Decomposition temperature:                    | >130°C   |
| r) | Viscosity:                                    | not determined   |
| s) | Explosive properties:                         | Not explosive  |
| t) | Oxidising properties:                         | Not an oxidiser  |

## SECTION 10: STABILITY AND REACTIVITY

|   |   |
|---|---|
| <b>Reactivity</b>                         | Stable under normal conditions of use. Will not polymerise.   |
| <b>Chemical stability</b>                 | High temperature exothermic decomposition >130°C. Do not heat above 50°C.   |
| <b>Possibility of hazardous reactions</b> | No hazardous reactions when stored and handled according to instructions.   |
| <b>Conditions to avoid</b>                | Sources of ignition, heat and flames.   |
| <b>Incompatible materials</b>             | Avoid contact with strong alkalis, acids and oxidising agents.  |
| <b>Hazardous decomposition Products:</b>  | Combustion produces hydrochloric acid, ethyl and diethyl sulphides and nitrogen oxides. Thermal decomposition will evolve toxic and irritant vapours. |

## SECTION 11: TOXICOLOGICAL INFORMATION

|                                    |   |
|------------------------------------|---|
| <b>Oral LD<sub>50</sub> rat:</b>   | >200 - 500 mg/kg (GHS Cat 3)  |
| <b>Dermal LD<sub>50</sub> rat:</b> | >2000 mg/kg (GHS Cat 5)   |
| <b>Inhalation:</b>                 | LC <sub>50</sub> (rat) 2.62 mg/L 4h   |
| <b>Eye irritation:</b>             | Causes serious eye irritation. Vapours can irritate the eyes.   |
| <b>Skin irritation:</b>            | 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 technical)

**Fish toxicity:** LC<sub>50</sub> 96 h rainbow trout 0.0013 mg/L

**Daphnia toxicity:** EC<sub>50</sub> 48 h *Daphnia magna* 0.001 mg/L

**Algal toxicity:** NOEC *Selenastrum capricornutum* >0.4 mg/L

**Avian toxicity:** Acute oral LD<sub>50</sub> Bobwhite quail 13.3 mg/kg  
8-Day dietary LC<sub>50</sub> Mallard duck: 203 mg/kg

**Bee toxicity:** Toxic to bees:  
Oral LD<sub>50</sub> 48 h 0.25 µg/bee  
Contact LD<sub>50</sub> 48 h 0.059 µg/bee

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

## 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)



|                                |              |                             |           |
|--------------------------------|--------------|-----------------------------|-----------|
| <b>Transport hazard class:</b> | ADR/RID: 6.1 | IMDG 6.1                    | IATA: 6.1 |
| <b>Packaging group:</b>        | ADR/RID: III | IMDG: III                   | IATA: III |
| <b>Environmental hazard:</b>   | 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.

|      |   |
|------|---|
| 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 format.

Supersedes version issued Dec 2009