

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 31-7-2016 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Substance
Name : Chlorpyrifos Techn. min 97%
EC index no : 015-084-00-4
EC no : 220-864-4
CAS No : 2921-88-2
Type of product : Biocide
Formula : $C_9H_{11}Cl_3NO_3PS$
Synonyms : Chlorpyrifos

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

1.2.1. Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Insecticide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Simonis B.V.
7000 AP Doetinchem - The Netherlands
T +31 314 333 700 - F +31 314 344 167
agrochem@simonisbv.nl - <http://www.simonisbv.nl/>

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Remark
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine	Avonley Road SE14 5ER London	0870 243 2241	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 3 H301
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400 (M=1000)
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Very toxic to aquatic life with long lasting effects. Toxic if swallowed.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS06

GHS09

Signal word (CLP) : Danger
Hazard statements (CLP) : H301 - Toxic if swallowed
H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling hands, forearms and face
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P301+P310 - IF SWALLOWED: immediately call a POISON CENTER or doctor/physician
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

for breathing
P405 - Store locked up
P501 - Dispose of contents/container to an authorised waste collection point

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : Chlorpyrifos Techn. min 97%
CAS No : 2921-88-2
EC no : 220-864-4
EC index no : 015-084-00-4

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Chlorpyrifos	(CAS No) 2921-88-2 (EC no) 220-864-4 (EC index no) 015-084-00-4	>= 90	Not classified

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. Seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not apply mouth-to-mouth resuscitation. In case of breathing difficulties administer oxygen. Get medical advice/attention.

First-aid measures after skin contact : Remove contaminated clothes. Wash skin with mild soap and water. Take to hospital. Get medical advice/attention.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Do not induce vomiting without medical advice. Do not apply mouth-to-mouth resuscitation. Get immediate medical advice/attention.

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

Symptoms/injuries after ingestion : Toxic if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Non flammable.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : For further information, refer to section 10 : "Stability and Reactivity".

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. For further information refer to section 8 : "Exposure-controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : "Exposure-controls/personal protection". Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Concerning personal protective equipment to use, see item 8. Ensure good ventilation of the work station.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Keep away from food, drink and animal feedingstuffs. Store locked up.

Incompatible products : strong alkalis. Strong acids. Strong oxidation agent.

Storage temperature : 0 - 30 °C

Heat and ignition sources : Keep away from heat and direct sunlight.

7.3. Specific end use(s)

Insecticide.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chlorpyrifos Techn. min 98% (2921-88-2)		
United Kingdom	Local name	Chlorpyrifos (ISO)
United Kingdom	WEL TWA (mg/m ³)	0,200000000 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	0,600000000 mg/m ³
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Protective clothing. Gloves. Protective goggles. Wear respiratory protection.

Materials for protective clothing:

Condition	Material	Standard
	Nitrile rubber/PVC	EN 340

Hand protection:

Wear suitable gloves resistant to chemical penetration. Chemical resistant gloves (according to European standard NF EN 374 or equivalent)

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves, Reusable gloves	nitrile rubber (NBR)	6 (> 480 minutes)	0,38		EN 374
Disposable gloves, Reusable gloves	Polyvinylchloride (PVC)	6 (> 480 minutes)	0,7		EN 374

Eye protection:

Safety glasses. DIN EN 166

Type	Use	Characterizations	Standard
Protective goggles	Droplet, Dust, Fine dust		EN 166

Skin and body protection:

Wear suitable protective clothing. CEN : EN 340; EN 369; EN 465. EN 13034

Respiratory protection:

Wear appropriate mask. EN 149

Device	Filter type	Condition	Standard
Self-contained breathing apparatus (SCBA)	(FFP2)		EN 149



Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Molecular mass	: 350,6 g/mol
Colour	: Pale yellow to light brown.
Odour	: Mercaptan.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 40 - 42 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 70 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not flammable
Vapour pressure	: 2,7 mPa (Physical state at 25 °C)
Relative vapour density at 20 °C	: No data available
Relative density	: 1,44 (at 22 °C)
Solubility	: Water: 1,4 mg/l Acetone: 6500 g/l (Physical state at 25 °C)
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

Keep away from heat and direct sunlight.

10.5. Incompatible materials

strong alkalis. Strong acid. Strong oxidation agent.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed.

Chlorpyrifos Techn. min 98% (2921-88-2)	
LD50 oral rat	> 229 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 0,385 mg/l/4h

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Chlorpyrifos Techn. min 98% (2921-88-2)	
LC50 fishes 1	0,024 mg/kg
EC50 Daphnia 1	0,16 µg/l
EC50 72h algae (1)	0,4 mg/l

12.2. Persistence and degradability

Chlorpyrifos Techn. min 98% (2921-88-2)	
Persistence and degradability	Biodegradable.

12.3. Bioaccumulative potential

Chlorpyrifos Techn. min 98% (2921-88-2)	
BCF fish 1	1375 mg/kg Oncorhynchus mykiss
Bioaccumulative potential	Potentially bioaccumulable.

12.4. Mobility in soil

No additional information available

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.5. Results of PBT and vPvB assessment

Chlorpyrifos Techn. min 98% (2921-88-2)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods






Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Additional information : Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
2783	2783	2783	2783	2783
14.2. UN proper shipping name				
ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS)	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS)	Organophosphorus pesticide, solid, toxic (CHLORPYRIFOS)	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS)	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS)
Transport document description				
UN 2783 ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS), 6.1, II, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 2783 ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS), 6.1, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2783 Organophosphorus pesticide, solid, toxic (CHLORPYRIFOS), 6.1, II, ENVIRONMENTALLY HAZARDOUS	UN 2783 ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS), 6.1, II, ENVIRONMENTALLY HAZARDOUS	UN 2783 ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC (CHLORPYRIFOS), 6.1, II, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
6.1	6.1	6.1	6.1	6.1
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : T7
Special provisions (ADR) : 61, 274, 648
Limited quantities (ADR) : 500g
Excepted quantities (ADR) : E4
Packing instructions (ADR) : P002, IBC08
Special packing provisions (ADR) : B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T3
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAH, L4BH

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Tank special provisions (ADR)	: TU15, TE19
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V11
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9, S19
Hazard identification number (Kemler No.)	: 60
Orange plates	:



Tunnel restriction code (ADR)	: D/E
EAC code	: 2X

- Transport by sea

Special provisions (IMDG)	: 61, 274
Limited quantities (IMDG)	: 500 g
Excepted quantities (IMDG)	: E4
Packing instructions (IMDG)	: P002
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B2, B4
Tank instructions (IMDG)	: T3
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-A
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW2
Properties and observations (IMDG)	: Solid pesticides present a very wide range of toxic hazard. Toxic if swallowed, by skin contact or by inhalation.
MFAG-No	: 152

- Air transport

PCA Excepted quantities (IATA)	: E4
PCA Limited quantities (IATA)	: Y644
PCA limited quantity max net quantity (IATA)	: 1kg
PCA packing instructions (IATA)	: 669
PCA max net quantity (IATA)	: 25kg
CAO packing instructions (IATA)	: 676
CAO max net quantity (IATA)	: 100kg
Special provisions (IATA)	: A3, A5
ERG code (IATA)	: 6L

- Inland waterway transport

Classification code (ADN)	: T7
Special provisions (ADN)	: 61, 274, 648, 802
Limited quantities (ADN)	: 500 g
Excepted quantities (ADN)	: E4
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: T7
Special provisions (RID)	: 61, 274, 648
Limited quantities (RID)	: 500g
Excepted quantities (RID)	: E4
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAH, L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE9, CE12
Hazard identification number (RID)	: 60

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Chlorpyrifos Techn. min 98% is not on the REACH Candidate List

Chlorpyrifos Techn. min 98% is not on the REACH Annex XIV List

Type of product (Biocide) 18 - Insecticides, acaricides and products to control other arthropods

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

SDS	Safety Data Sheet
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
RID	Regulations concerning the International Carriage of Dangerous Goods by Rai
LC50	Median lethal concentration
LD50	Median lethal dose
CAS	CAS (Chemical Abstracts Service) number
	EG-nr.: EINECS- en ELINCS-number
	EINECS: European Inventory of Existing Commercial Substances
NOEC	No-Observed Effect Concentration
	STOT: Specific Target Organ Toxicity
PNEC	Predicted No-Effect Concentration
	PEC: Predicted Environmental Concentration
	OEL: Occupational Exposure Limit

Data sources : according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830.

Chlorpyrifos Techn. min 97%

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Other information

: REACH Disclaimer:

This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number). **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
H301	Toxic if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Safety Data Sheet applicable for regions

: GB - United Kingdom

This Safety Data Sheet is compiled by :

Trade Wind B.V. (info@twnl.com)

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product