



SAFETY DATA SHEET

Chlorpyrifos 480 EC

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

Product identifier

Chlorpyrifos 480 EC

Pure substance/mixture

Mixture

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

Recommended Use

Insecticide

Uses advised against

No information available

Details of the supplier of the safety data sheet

Supplier Address

ADAMA Makhteshim Ltd
PO Box 60
Beer Sheva 8410001 Israel

For further information, please contact

Email address

SDS@ADAMA.COM

Emergency Telephone

Emergency Telephone

+972-03-6106666 Subscription no. 36789 (ADAMA Makhteshim Ltd.)

Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2A - (H319)
Skin sensitization	Category 1 - (H317)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Flammable liquids	Category 3 - (H226)

Label Elements

Hazard pictograms



Signal word

Warning

Hazard Statements

H302 - Harmful if swallowed
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H332 - Harmful if inhaled
 H410 - Very toxic to aquatic life with long lasting effects
 H226 - Flammable liquid and vapor

Precautionary Statements

P102 - Keep out of reach of children
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P243 - Take precautionary measures against static discharge
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
 P270 - Do not eat, drink or smoke when using this product
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical Name	Weight-%	CAS No
Chlorpyrifos	42 - 47	2921-88-2
Xylene	44 - 48	1330-20-7
Calcium dodecyl benzene sulphonate (in butanol)	3 - 4	90194-26-6

Section 4: FIRST AID MEASURES

First aid measures

General advice

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!

Inhalation

Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms

persist, call a physician.

Ingestion Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms None known

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

No information available.

Special hazards arising from the substance or mixture

No specific hazard known.

Advice for firefighters

In the event of fire, wear self-contained breathing apparatus

In the event of fire and/or explosion do not breathe fumes.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Use only with adequate ventilation. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for cleaning up

Take up mechanically, placing in appropriate containers for disposal.

Reference to other sections

Other Information

See also section 8,13

Section 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use only with adequate ventilation. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

National occupational exposure limits

Chemical Name	European Union	United Kingdom	France	Spain	Germany
Chlorpyrifos 2921-88-2		STEL: 0.6 mg/m ³ TWA: 0.2 mg/m ³ Skin	TWA: 0.2 mg/m ³	S* TWA: 0.1 mg/m ³	TWA: 0.2 mg/m ³
Xylene 1330-20-7	S* TWA 50 ppm TWA 221 mg/m ³ STEL 100 ppm STEL 442 mg/m ³	STEL: 100 ppm STEL: 441 mg/m ³ TWA: 50 ppm TWA: 220 mg/m ³ Skin	TWA: 50 ppm TWA: 221 mg/m ³ STEL: 100 ppm STEL: 442 mg/m ³	S* STEL: 100 ppm STEL: 442 mg/m ³ TWA: 50 ppm TWA: 221 mg/m ³	TWA: 100 ppm TWA: 440 mg/m ³ Ceiling / Peak: 200 ppm Ceiling / Peak: 880 mg/m ³ Skin
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark
Chlorpyrifos 2921-88-2		TWA: 0.1 mg/m ³		TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³ Skin	TWA: 0.2 mg/m ³ Skin
Xylene 1330-20-7	TWA: 50 ppm TWA: 221 mg/m ³ STEL: 100 ppm STEL: 442 mg/m ³ Skin	STEL: 150 ppm TWA: 100 ppm	Skin STEL: 442 mg/m ³ TWA: 210 mg/m ³	TWA: 50 ppm TWA: 220 mg/m ³ STEL: 100 ppm STEL: 440 mg/m ³ Skin	TWA: 25 ppm TWA: 109 mg/m ³ Skin
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Chlorpyrifos 2921-88-2	Skin STEL 0.4 mg/m ³ TWA: 0.2 mg/m ³	Skin TWA: 0.2 mg/m ³	NDSch: 0.6 mg/m ³ TWA: 0.2 mg/m ³ Skin	TWA: 0.2 mg/m ³ Skin STEL: 0.6 mg/m ³	TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³ Skin
Xylene 1330-20-7	Skin STEL 100 ppm STEL 442 mg/m ³ TWA: 50 ppm TWA: 221 mg/m ³	Skin STEL: 200 ppm STEL: 870 mg/m ³ TWA: 100 ppm TWA: 435 mg/m ³	TWA: 100 mg/m ³ Skin	TWA: 25 ppm TWA: 108 mg/m ³ Skin STEL: 37.5 ppm STEL: 135 mg/m ³	TWA: 50 ppm TWA: 221 mg/m ³ STEL: 100 ppm STEL: 442 mg/m ³ Skin

Exposure controls

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection	Tight sealing safety goggles.
Hand Protection	Gloves made of plastic or rubber.
Body Protection	Gloves made of plastic or rubber, Antistatic footwear, Wear fire/flamm resistant/retardant clothing, Suitable protective clothing, Apron, Rubber boots, Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Respiratory protection	Use only with adequate ventilation.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not eat, drink or smoke when using this product.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**Physical and Chemical Properties**

<u>Property</u>	<u>Values</u>	<u>Method</u>	<u>Remarks</u>
Appearance			
Physical state	: Liquid		
Color	: clear amber		
Odor	: characteristic		
Odor threshold	: No data available		
pH	: 4.5 - 6.5	CIPAC MT 75.3	1 % aqueous solution
Melting point/freezing point °C	: ----		Not Applicable
Boiling point/boiling range °C	: No data available		
Flash point °C	: 32	CIPAC MT 12.2	CC (closed cup)
Evaporation rate	: ----		No data available
Flammability (solid, gas)	: Not applicable for liquids		
Upper/lower flammability or explosive limits	: No data available		
Vapor pressure kPa	: ----		Not Applicable
Vapor density	: No data available		
Relative density	: 1.06 - 1.08	CIPAC MT 3.2.1	20 °C
Solubility(ies) mg/l	: ----		Not Applicable
Partition Coefficient (n-octanol/water) Log Pow	:		See Section 12 for more information
Autoignition temperature °C	: No data available		
Decomposition temperature °C	: No data available		
Kinematic viscosity mm²/s 40 °C	: ----		No data available
Explosive properties	: No data available		
Oxidizing properties	: No data available		
Other Information			
Bulk density g/ml	:		Not Applicable
Surface tension mN/m	: ----		No data available

Section 10: STABILITY AND REACTIVITY**Reactivity**

Not available.

Chemical stability

Stable under normal conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible Materials

No information available

Hazardous Decomposition Products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION

Information on toxicological effects

Acute toxicity

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Oral LD50 mg/kg	: 508	Rat	OECD 401	
Dermal LD50 mg/kg	: > 2000	Rabbit	OECD 402	
Inhalation LC50 mg/l/4h	: 3.3	Rat	EPA-FIFRA 81-3	
Skin corrosion/irritation	: Irritating to skin	Rabbit		
Serious eye damage/eye irritation	: Irritating to eyes	Rabbit		
Respiratory/skin sensitization	: Skin sensitizer	Guinea pig	EPA-FIFRA 81-6	

Chronic toxicity

Germ cell mutagenicity

Chemical Name
Chlorpyrifos : Not classified

Carcinogenicity

Chemical Name
Chlorpyrifos : Not Carcinogenic

Reproductive toxicity

Chemical Name
Chlorpyrifos : Not toxic for the reproductive system

STOT - single exposure

Chemical Name
Chlorpyrifos : No information available

STOT - repeated exposure

Chemical Name
Chlorpyrifos : No information available

Aspiration hazard

Chemical Name
Chlorpyrifos : No information available

Section 12: ECOLOGICAL INFORMATION

Toxicity**Aquatic toxicity**

	<u>Values</u>	<u>Species</u>	<u>Method</u>	<u>Remarks</u>
Acute toxicity				
Fish 96-hour LC50 mg/l	:			No data available
Crustacea 48-hour EC50 mg/l	:			No data available
Algae 72-hour EC50 mg/l	:			No data available
Other plants EC50 mg/l	:			No data available

Terrestrial Toxicity**Birds Oral LD50 mg/kg****Chemical Name**

Chlorpyrifos : 476

Bees Oral LD50 µg/bee**Chemical Name**

Chlorpyrifos : 0.25

Persistence and degradability**Abiotic Degradation****Water DT50 days****Chemical Name**

Chlorpyrifos : 16 - 35 pH 7; 25 ° C

Soil DT50 days**Chemical Name**

Chlorpyrifos : 13 - 22

Biodegradation**Chemical Name**

Chlorpyrifos : Not readily biodegradable

Bioaccumulative potential**Partition Coefficient****(n-octanol/water) Partition Coefficient (n-octanol/water) Log Pow****Chemical Name**

Chlorpyrifos : 4.76 OECD 107

Bioconcentration factor (BCF)**Chemical Name**

Chlorpyrifos : 1374 No bioaccumulation potential

Mobility in soil**Adsorption/Desorption****Chemical Name**

Chlorpyrifos : 2785 - 31000 OECD 106 Koc

Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Improper disposal or reuse of this container may be dangerous and illegal.
Other Information	Waste codes should be assigned by the user based on the application for which the product was used.

Section 14: TRANSPORTATION INFORMATION

IMDG/IMO

UN/ID No *	3017
Proper shipping name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (Chlorpyrifos)
Hazard Class	6.1 ,3
Packing Group	III
Marine pollutant	Yes
Special precautions for user	

RID/ADR

UN/ID No *	3017
Proper shipping name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (Chlorpyrifos)
Hazard Class	6.1 ,3
Packing Group	III
Environmental hazard	Yes
Special precautions for user	

ICAO/IATA

UN/ID No *	3017
Proper shipping name	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE (Chlorpyrifos)
Hazard Class	6.1 ,3
Packing Group	III
Environmental hazard	Yes
Special precautions for user	
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not Applicable



* Note: UN3077 & UN3082 – These products may be transported as non-dangerous goods under the special provisions of IMDG Code 2.10.2.7; ADR SP375 and ICAO/IATA A197 when packed in single or inner packaging of up to 5L for liquids or 5 kg or less for solids.

Section 15: REGULATORY INFORMATION

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

Section 16: OTHER INFORMATION

Revision Note

Changes made to the last version are labeled with this sign ***.

List of Acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CAS Number - Chemical Abstracts Service number
EC Number - EINECS and ELINCS Number
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
OECD - Organization for Economic Co-operation and Development
PBT - Persistent, Bioaccumulative and Toxic substance
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
STOT - Specific Target Organ Toxicity
vPvB - Very Persistent and Very Bioaccumulative

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet