

Preparation Date 14-Feb-2018

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Revision Number:01

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product Identifier****Product Description** Chlorpyrifos 240 g/L CS**Other means of Identification****UN-No** UN 3018**Recommended use of the chemical and restriction on use****Recommended use** Insecticide**Uses advised against** Activities contrary to label activities**Details of the Supplier of the Safety Data Sheet****Supplier Address****UPL Limited**
Uniphos House, Madhu Park,
Khar (W), Mumbai, India
Tel: +91-(022)- 2646-8000**E-mail address** info.in@uniphos.com**Emergency Telephone Number****Company Phone Number** +91-(022)- 2646-8000
Emergency telephone number +91-(022)- 2646-8000 (From 9:00 A.M. to 17:00 P.M.)**2. Hazard Identification****Classification**

Acute Toxicity Oral	Category 3 - (H301)
Acute Toxicity Dermal	Category 5 - (H313)
Skin Corrosion/Irritation	Category 2 - (H315)
Eye damage/Irritation	Category 2 - (H319)
Skin Sensitization	Category 1 - (H317)
STOT - Single Exposure	Category 3 - (H335)
Aquatic acute Hazard	Category 1 - (H400)
Aquatic Chronic Hazard	Category 1 - (H410)

Label elements**Signal word** Danger**Hazard Statements****H301** - Toxic if swallowed
H313 - May be harmful in contact with skin

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H315 - Causes skin irritation
H319 - Causes eye irritation
H317 - May cause an allergic skin reaction
H335 - May cause respiratory tract irritation
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements**Prevention**

P264 Wash hands, face and exposed skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Response

P308+P313 IF exposed or concerned: Get medical advice or attention.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor or physician.
P304+P340 IF INHALED: remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE/doctor or physician if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P321 Specific treatment (see ... on this label)
P362+P364 Take off contaminated clothing and wash it before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P330 Rinse mouth.

P321 Specific treatment (see ... on this label).
P391 Collect Spillage.

Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

Other Information

No other hazards known.

3. Composition/information on Ingredients

Chemical name	CAS-No	W/W %
Chlorpyrifos	2921-88-2	20-25

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures**First-aid measures****Eye contact**

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.

Skin contact

Remove contaminated clothing and shoes immediately, then wash with plenty of water. Clean contaminated clothing and shoes before re-use or discard if they

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cannot be thoroughly cleaned. If skin irritation or rash occurs, get medical attention.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Do not induce vomiting unless told by physician. If vomiting occurs ensure patient can breathe. Get immediately medical attention.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Give artificial respiration if victim is not breathing. Get medical attention, if you feel unwell.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects The most important known symptoms and effects are described in the labelling (See section 2) and/or in section 11.

Indication of immediate medical attention and special treatment needed

Notes to physician Treat symptomatically and supportively.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Water spray, alcohol-resistant foam, dry chemical or carbon dioxide

Unsuitable extinguishing media High pressure water jets may scatter and spread fire.

Special hazards arising from the substance or mixture

Special Hazard Thermal decomposition can lead to release of irritating/toxic fumes (or gases) in fire.

Hazardous combustion products Hydrogen chloride, phosgene, phosphorus oxides, nitrogen oxides, sulphur oxides

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective suit. Use standard firefighting procedures and consider the hazards of involved material.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Do not eat, drink or smoke while using this product. Avoid contact with skin and eyes. Do not breathe vapor/mist. Keep unnecessary people away. Isolate area. Keep out of low areas. Vapors can accumulate in low area. Ventilate closed spaces before entering.

Environmental precautions

Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

Methods and material for containment and cleaning up

Methods for Clean-Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Follow all label instructions regarding spill clean-up and residual disposal methods.

Reference to other sections

Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

7. Handling and Storage

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Precautions for safe handling**Handling**

Wear Suitable protective equipment. Avoid contact with skin and eyes. Avoid breathing vapour or mist. Ensure adequate ventilation. Wash hands, face and exposed skin thoroughly after handling. Avoid release to environment. Empty containers may contain hazardous residues. Do not reuse empty container.

Conditions for safe storage, including any incompatibilities**Storage**

Store in accordance with local regulation. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store locked up. Keep away from incompatible material. Do not store in unlabelled containers. Do not store material near food, feed or drinking water.

Incompatible materials

Strong acids, caustics, amines, Brass

8. Exposure Controls/Personal Protection**Exposure Guideline**

Apply technical measures to comply with the occupational exposure limit.

Chemical Name	United Kingdom	China	Korea	Malaysia
Chlorpyrifos	STEL: 0.6 mg/m ³	TWA: 0.2 mg/m ³ STEL: 0.6 mg/m ³	STEL: 0.6 mg/m ³ TWA:0.2 mg/m ³ Skin	TWA:0.2 mg/m ³

Engineering controls

Ensure adequate ventilation, especially in confined areas. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protective equipment**Eye/Face Protection**

Avoid contact with eyes. Where there is potential for eye contact have eye flushing equipment available. Tightly fitting safety goggles. Face-shield.

Skin/Hand protection

Wear protective gloves/clothing. Long-sleeved clothing.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental exposure controls

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Local authorities should be advised if significant spillage cannot be contained.

General hygiene considerations

Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties**Information on basic physical and chemical properties****Appearance**

Pale Yellow liquid capsule suspension

Physical state

Liquid

Odor

No information available

Color

Pale yellow liquid

Odor threshold

No information available

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<u>Property</u>	<u>VALUES</u>	<u>Remarks/ Method</u>
pH	6.5 - 7.5	
Melting point/freezing point	No information available	
Boiling Point/Range	No information available	
Density	1.075±0.02 g/ml at 20°C	
flammability (solid, gas)	Not applicable	
Upper/lower flammability or Explosive limit	No information available	
Vapor density	No information available	
Vapor pressure	No information available	
Water solubility	No information available	
Solubility in Other Solvents	No information available	
Flash Point	>100°C	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Dynamic Viscosity	No information available	
Kinematic Viscosity	No information available	
Oxidizing properties	No information available	
Explosive properties	No information available	
Surface Tension	No information available	

10. Stability and Reactivity

Reactivity

None known.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reaction

None under normal processing.

Conditions to avoid

Extreme heat, sparks and opens flames. Avoid contact with incompatible material.

Incompatible Materials

Strong acids, caustics, amines, Brass

Hazardous decomposition products

Thermal decomposition can lead to release of irritating/toxic fumes (or gases) in fire.

Thermal hazardous decomposition products: Hydrogen chloride, phosgene, phosphorus oxides, nitrogen oxides, sulphur oxides

11. Toxicological Information

Information on Toxicological Effects

LD50 Oral = 66 mg/kg

LD50 Dermal = >1250 mg/kg

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LC50 Inhalation = >3.06 mg/l
(Source: PPDB)

Local effect

Inhalation	May cause respiratory tract irritation
Eye contact	Causes eye irritation
Skin contact	May be harmful in contact with skin. May cause an allergic skin reaction
Ingestion	Toxic if swallowed

Chronic toxicity

Skin Corrosion/Irritation	Causes skin irritation
Eye damage/irritation	Causes eye irritation
Sensitization	May cause an allergic skin reaction
Mutagenic effects	No additional information available
Carcinogenic effects	No additional information available
Reproductive effects	No additional information available
STOT - Single Exposure	May cause respiratory tract irritation
STOT - repeated exposure	No additional information available
Aspiration hazard	No additional information available

12. Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects

LC50/Fish/96hr = 0.025 mg/l

EC50/Daphnia/12hr = 0.00010mg/l

EC50/Algae/72hr = 0.043 mg/l

(Source: PPDB)

Persistence and Degradability

No information available.

Bioaccumulative Potential

No information available.

Chemical Name	Log Pow
Chlorpyrifos	4.7

(Source: PPDB)

Other Adverse Effects

No information available.

13. Disposal Considerations

Waste Treatment Methods

Waste Disposal Method Dispose of in accordance with applicable Federal, State, local laws and regulations.

Contaminated packaging Empty container should be taken for local recycling, recovery or waste disposal. Do not

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re-use container. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport Information

IMDG/IMO

UN-No	UN 3018
Proper Shipping name	Organophosphorus pesticide, liquid, toxic, (Chlorpyrifos)
Hazard class	6.1
Packing group	III
EMS No.	F-A,S-A
Marine pollutant	Yes

IATA/ICAO

UN-No	UN 3018
Proper Shipping name	Organophosphorus pesticide, liquid ,toxic (Chlorpyrifos)
Hazard class	6.1
Packing group	III
Marine pollutant	Yes

15. Regulatory Information

International Inventories

(Chlorpyrifos: CAS 2921-88-2)

USINV	Complies
TSCA	-
EINECS/ELINCS	Complies
DSL/NDSL	Complies
ENCS	Complies
PICCS	Complies
KECL	Complies
China	Complies
AICS	Complies

- : Not listed/Not determined

Legend

PPDB - Pesticide properties database

USINV -TSCA/FIFRA Inventory

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

16. Other Information

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End of Safety Data Sheet