



## MATERIAL SAFETY DATA SHEET

### SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	CHLORPYRIFOS TECH. 97%
Company	CHINA JIANGSU INTERNATIONAL ECONOMIC AND TECHNICAL COOPERATION GROUP, LTD
Address	9F, GOLDEN EAGLE HANZHONG NEW BUILDING, NO.1 HANZHONGMEN STREET, NANJING 210029 CHINA
Phone number	86-25-86569810
Emergency phone	86-25-86663090

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Product Name	CHLORPYRIFOS
CAS No.	2921-88-2
Percentage	≥97%

### SECTION 3: HAZARDS IDENTIFICATION

Cholinesterase inhibitor; may be fatal if swallowed.

·Harmful if absorbed through skin or inhaled.

·Causes moderate eye irritation.

·Avoid breathing product.

·Avoid contact with eyes, skin or clothing.

·Keep out of reach of children.

Symptoms of over exposure are headaches, nausea, vomiting, cramps, weakness, blurred vision, pinpoint pupils, tightness in chest, labored breathing, nervousness, sweating, watering of eyes, drooling, muscle spasms and coma.

#### POTENTIAL HEALTH EFFECTS:

Eye: Irritating, and may injure eye tissue if not removed promptly.

Skin: Harmful if absorbed through the skin. Large exposures could be fatal.

Inhalation: mist concentrations may be harmful if inhaled. High concentrations could be fatal.

Ingestion: May be fatal if swallowed.

#### POTENTIAL PHYSICAL HAZARDS:

Combustible liquid and vapor.

### SECTION 4: FIRST AID MEASURES



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### FIRST AID Organophosphate

#### SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Don not give anything by mouth to an unconscious person.

#### IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

#### ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

#### INHALED:

- Move person to fresh air.
- If person is not breathing,call 122 or an ambulance, then give artificial respiration, preferably mouth-to –mouth if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

Note to Physician: This product contains an organophosphate that inhibits cholinesterase. Treat symptomatic. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure. Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

#### NOTE TO PHYSICIAN:

Chlorpyrifos is a cholinesterase inhibitor.

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## SECTION 5: FIRE FIGHTING MEASURES

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**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub>, dry chemical

#### FIRE HAZARDS:

Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic, irritating gases may be formed under fire conditions. Rapid decomposition above 320-392°F (160-200°C) can occur. Violent rupture due to over-pressurization may occur at temperatures generated during a fire.



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### SECTION 6: ACCIDENTAL RELEASE MEASURES

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#### **ACTION TO TAKE FOR SCATTERS:**

Cut off fire source. Clean up scatters immediately, and treat properly, using precautions described in Section 8. Isolate hazard area. Keep unnecessary & unprotected personnel from entering, and keep the residual away from drainage system.

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### SECTION 7: HANDLING AND STORAGE

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#### **PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

Keep out of reach of children. Do not get in eyes, on skin or clothing. Avoid breathing mist. Users should wash hands before eating, drinking, using tobacco, or using the toilet. For handling relative to the end-use of this product, read the product label. Store in original container in a dry storage area.

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### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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#### **ENGINEERING CONTROLS:**

Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

#### **RESPIRATORY PROTECTION:**

When atmospheric levels exceed the exposure guidelines, it suggests wearing an air-purifying face-shield (half-style). For emergency rescue and evacuation, make sure an air-respiration apparatus or an oxygen-respiration apparatus should be wear.

#### **SKIN PROTECTION:**

Use protective clothing impervious to this material. Selection of specific items such as face-shield, gloves, boots, apron, or full body suit will depend on operation.

#### **EYE PROTECTION:**

Use chemical goggles.

#### **APPLICATORS AND ALL OTHER HANDLERS:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves.
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacture's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.



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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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APPEARANCE: LIGHT YELLOW TO OFF-WHITE SOLID

MELTING POINT: 42°C~43.5°C

MOLECULAR WEIGHT: 350.6

MOLECULAR FORMULA: C<sub>9</sub>H<sub>11</sub>Cl<sub>3</sub>NO<sub>3</sub>PS

ACIDITY(AS H<sub>2</sub>SO<sub>4</sub>) ≤0.3%

VAPOR PRESSURE(25°C): 2.7mPa

SOLUBILITY IN WATER (25°C): 1.4×10<sup>-3</sup> g/kg

SOLUBLE IN MOST ORGANIC SOLVENTS

DENSITY(20°C): 1.44 g/cm<sup>3</sup>

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### SECTION 10: STABILITY AND REACTIVITY

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**STABILITY:** Unstable in alkalescence condition, and stable in weak acidity condition.

**HAZARDS DECOMPOSITION PRODUCTS:** NATCP

**HAZARDOUS POLYMERIZATION:** Not known to occur.

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### SECTION 11: TOXICOLOGICAL INFORMATION

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**EYE:** May cause moderate eye irritation and/or corneal injury. Vapors may irritate the eyes.

**SKIN:** Acute dermal LD<sub>50</sub> for rats >2000mg/kg.

Prolonged exposure may cause moderate skin irritation.

**INGESTION:** The acute oral LD<sub>50</sub> for rats 233 mg/kg (males) and 147mg/kg (females).

Single dose oral toxicity is moderate.

Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause lung damage or death due to chemical pneumonia.

Excessive exposure may produce organophosphate-type cholinesterase inhibition.

Excessive vapor concentrations are attainable and could be hazardous on single exposure.

Excessive exposure to solvent may cause respiratory irritation and central nervous system depression. Signs and symptoms of central nervous system depression are in order of increasing exposure, headache, dizziness, drowsiness, and incoordination.

**SYSTEMIC (OTHER TARGET ORGAN EFFECTS):** Excessive exposure may produce organophosphate-type cholinesterase inhibition. Signs and symptoms of excessive exposure to chlorpyrifos may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, tightness in chest, excessive urination, convulsions. Chlorpyrifos produced mild adrenal effects when fed to rats, but only at doses that great exceeded any exposures that would be received during normal use of this product, Solvent has been



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reported to cause liver, kidney and blood effects at high exposure levels.

**CANCER INFORMATION:** Chlorpyrifos did not cause cancer in laboratory animals.

**TERATOLOGY:** N/A

**REPRODUCTIVE EFFECTS:** N/A

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### SECTION 12: ECOLOGICAL INFORMATION

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#### ENVIRONMENTAL FATE

The photolysis half-life in water is 60-120 days.

Half-life in the soil is 60-120 days.

Material is moderately toxic to aquatic organisms-LC50(96h), bulltrout 15mg/L(96h)。

Toxic to bees.

INGESTION: Acute oral LD<sub>50</sub>: for Guinea pig 500 mg/kg, For rabbits 1000-2000mg/kg,

Acute dermal LD<sub>50</sub> for rats 2000mg/kg.

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### SECTION 13: DISPOSAL CONSIDERATIONS

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#### PESTICIDE DISPOSAL:

Do not contaminate water, food. Open dumping is prohibited. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency or the hazardous waste representative at the nearest Regional Office.

#### CONTAINER DISPOSAL FOR REFILLABLE CONTAINERS:

Replace the dry-disconnect cap, if applicable, and seal all openings that have been opened during use. Return the empty container to a collection site. If the container has been damaged and cannot be returned according to the recommended procedures. Contact the Local Customer Service Center to obtain proper handling instructions.

#### CONTAINER DISPOSAL FOR NON-REFILLABLE CONTAINERS:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Or, triple rinse (or equivalent). Then puncture and dispose in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning, If burned, stay out of smoke.

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### SECTION 14: TRANSPORT INFORMATION

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#### SHIPPING DESCRIPTION:

Non-Bulk packaging: Organophosphorus pesticide, solid, toxic chlorpyrifos tech, 6.1, UN 2783, PG III



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Bulk packaging: Organophosphorus pesticide, solid, toxic chlorpyrifos tech, 6.1, UN 2783, PG III

UN NUMBER: 2783

PACKING GROUP: PG III

primary/subsidiary label: 6.1

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### SECTION 15: REGULATORY INFORMATION

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**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with national, or provincial, and local laws.

This product contains the following substance(s) listed as "Hazardous Substances", which may require reporting of releases:

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### SECTION 16: OTHER INFORMATION

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All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.