

## MATERIAL SAFETY DATA SHEET

### SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

**Product Name:** Kenso Agcare Kensban 500 Insecticide  
**Product Type:** Group 1B Insecticide  
**Company Name:** Kenso Corporation (M) Sdn Bhd  
**Address:** Unit 3C, 59, Oxford Street, Bulimba Queensland 4171  
**Telephone Number:** (07) 3217 9788  
**Facsimile Number:** (07) 3217 9733  
**Emergency Telephone Number:** 000 (Police or Fire Brigade)  
**13 11 26 (Poisons Information Centre)**  
**Use:** Insecticide for control of various insect pests in agriculture.

### SECTION 2 – HAZARDS IDENTIFICATION

**Hazard Classification:** Hazardous according to criteria of NOHSC Australia.  
**Risk Phrase(s):** R20 Harmful by inhalation  
R36 Irritating to eyes  
R65 Harmful: May cause lung damage if swallowed  
R24/25 Toxic in contact with skin and if swallowed.  
**Safety Phrase(s):** S2 Keep out of reach of children  
S20 When using, do not eat or drink  
S25 Avoid contact with eyes  
S36 Wear suitable protective clothing  
S38 In case of insufficient ventilation, wear suitable respiratory equipment  
S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show this container or label.  
**SUSDP Classification:** S6  
**ADG Classification:** Class 6.1 (ORANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC)  
**UN Number:** 3018

### Emergency Overview

**Physical Description & colour:** Light amber liquid.

**Odour:** Hydrocarbon odour.

**Major Health Hazards:** Poisoning from chlorpyrifos may affect the central nervous system, the cardiovascular system, and the respiratory system. It is also a skin and eye irritant. While some organophosphates are readily absorbed through the skin, studies in humans suggest that skin absorption of chlorpyrifos is limited. Symptoms of acute exposure to organophosphate or cholinesterase-inhibiting compounds may include the following: numbness, tingling sensations, incoordination, headache, dizziness, tremor, nausea, abdominal cramps, sweating, blurred vision, difficulty breathing or respiratory depression, and slow heartbeat. Very high doses may result in unconsciousness, incontinence, and convulsions or fatality.

### Potential Health Effects

#### Health Effects

##### Acute:

**Swallowed:** Muscle tremor, weakness and sweating. Effects body motor system. Cholinesterase inhibition symptoms.

**Eye:** Severe irritant

**Skin:** Severe irritant readily absorbed through skin and causes Cholinesterase inhibition symptoms.

**Inhaled:** Mildly toxic. Avoid breathing spray mists.

**Chronic:**

Cholinesterase activity returns to normal after ceasing exposure, generally 2 weeks.

**SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS number	Proportion
Chlorpyrifos	2921-88-2	50 % w/v
Surfactants	secret	10% w/v
Aromatic hydrocarbon solvent	secret	To 100 % w/v

**SECTION 4 – FIRST AID MEASURES**

<b>Swallowed</b>	If poisoning occurs, contact a doctor or Poisons Information Centre (Tel 131126). Administer one Atropine tablet every 5 minutes until dryness of the mouth occurs. If excessive dryness of mouth occurs cease Atropine treatment. Seek medical advice.
<b>Eye</b>	Irrigate with copious quantities of water for at least 15 minutes. In all cases of eye contamination it is sensible precaution to seek medical advice.
<b>Skin</b>	Wash contaminated skin with plenty of water. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.
<b>Inhaled</b>	Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.

**Advice to Doctor:**

Cholinesterase inhibitor, readily absorbed through the skin, cholinesterase activity recovers on removal from contact, approx two weeks to restore normal levels.

Atropine treatment may be necessary in combination with 1 g IV Pralidoxime for profound weakness and muscle twitching.

NB : This product also contains liquid hydrocarbon. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

**SECTION 5 – FIRE FIGHTING MEASURES**

**Fire/Explosion Hazard**

**Specific hazards**

**Fire fighting further advice**

Solvent vapours are flammable/explosive, where sufficient vapour exists. Avoid all ignition sources. High flash point combustible solvents Flash point > 61°C. Large fires have the potential to release decomposition products, use full protective clothing including breathing air system.

**Suitable extinguishing media**

Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder)

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

### Spills & Disposal

Clean up immediately. Wear protective equipment to prevent skin and eye contamination. Contain using sand or soil – prevent run off into drains and waterways. Use adsorbent (soil, sand or other inert material). Collect and seal in properly labelled containers for disposal. Alkali's, i.e. lime and soda ash hasten decomposition of chlorpyrifos.

Triple rinse containers, add rinsings to spray tanks and send containers for recycling or if not recycling, break, crush or puncture and bury empty containers in a local authority landfill or in accordance with local, state or federal regulation. Do not dispose of undiluted chemicals on site.

## SECTION 7 – HANDLING AND STORAGE

### Storage

Store in the closed, original container in a well-ventilated area. Do not store for prolonged periods in direct sunlight. DO NOT RE-USE CONTAINER FOR ANY PURPOSE. During storage keep from contact with fertilisers, pesticides and seeds. Water hastens decomposition; keep dry and prevent water entering container. Rotate stocks, chlorpyrifos degrades with time.

This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS1940. Refer to the state regulations for storage and transport requirements.

### Transport

This product is classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG) for the Transport by Road and Rail.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Exposure Standards:

None established for formulated product

Ingredient	TWA mg/m <sup>3</sup>
chlorpyrifos	0.2

### Engineering Controls:

Natural ventilation should be adequate under normal use conditions. Keep containers closed when not in use.

### Personal Protection:

Harmful if swallowed. Will irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. Avoid inhaling vapour or spray mist. When preparing spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and a face-shield or goggles. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Liquid
<b>Colour:</b>	Clear light amber liquid
<b>Odour:</b>	Hydrocarbon odour
<b>Vapour Pressure:</b>	Not applicable
<b>Specific Density:</b>	1.09 ± 0.01
<b>Flashpoint:</b>	62 °C
<b>Flammability Limits:</b>	Not applicable
<b>Solubility in Water:</b>	Forms emulsion

## SECTION 10 – STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	This product is unlikely to react or decompose under normal storage conditions.
<b>Conditions to avoid:</b>	This product should be kept in a cool place, preferably below 30 °C.
<b>Incompatibilities:</b>	Strong oxidising agents.
<b>Polymerisation:</b>	This product is unlikely to undergo polymerisation processes.

## SECTION 11 – TOXICOLOGICAL INFORMATION

<b>Chronic Effects:</b>	Repeated exposure could result in peripheral nervous system damage.
<b>Acute Toxicity – Oral:</b>	LD <sub>50</sub> (rats) 95 - 270 mg/kg for chlorpyrifos LD <sub>50</sub> (mice) 60 mg/kg for chlorpyrifos LD <sub>50</sub> (rabbits) 1000 mg/kg for chlorpyrifos
<b>Acute Toxicity – Dermal:</b>	LD <sub>50</sub> (rats) >2000 mg/kg for chlorpyrifos LD <sub>50</sub> (rabbits) 1000-2000 mg/kg for chlorpyrifos
<b>Acute Toxicity – Inhalation:</b>	LC <sub>50</sub> (rats) (4hr) >0.2 mg/l

### Chronic toxicity

Repeated or prolonged exposure to organophosphates may result in the same effects as acute exposure including the delayed symptoms, other effects reported in workers repeatedly exposed include impaired memory and disorientation, irritability, headache, concentration, severe depression, speech difficulties, delayed reaction times, nightmares, sleepwalking, and drowsiness or insomnia. An influenza-like condition with headache, weakness, loss of appetite, and malaise has also been reported.

## SECTION 12 – ECOLOGICAL INFORMATION

### Effects on birds

Chlorpyrifos is moderately to very highly toxic to birds.

LD<sub>50</sub> for pheasants is 8.41 mg/kg

LD<sub>50</sub> for mallard ducks is 112 mg/kg

LD<sub>50</sub> for chickens is 32 mg/kg

### Effects on aquatic organisms

Chlorpyrifos is very highly toxic to freshwater fish, aquatic invertebrates and estuarine and marine organisms.

LC<sub>50</sub> (96 hr) for chlorpyrifos in mature rainbow trout is 0.009 mg/l

LC<sub>50</sub> (96 hr) for chlorpyrifos in lake trout is 0.098 mg/l

LC<sub>50</sub> (96 hr) for chlorpyrifos in goldfish is 0.01 mg/l

LC<sub>50</sub> (96 hr) for chlorpyrifos in fathead minnow is 0.331 mg/l

### Acute Toxicity – Other Organisms

Aquatic and general agricultural uses of chlorpyrifos pose a serious hazard to wildlife and honeybees.

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Disposal:** Instructions concerning the disposal of this product and its containers are given on the product label. These should be carefully followed.

#### SECTION 14 – TRANSPORT INFORMATION

**UN Number:** 3018  
**Proper Shipping Name:** ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC  
**SUSDP Classification:** S6  
**ADG Class:** Class 6.1  
**Hazchem Code:** 2X  
**Packing Group:** III

#### SECTION 15 – REGULATORY INFORMATION

**SUSDP Classification** S6  
**Packaging & Labelling** POISON  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING  
**AICS (Australia)** All of the components in this product are listed on the Australian Inventory of Chemical Substances.

#### SECTION 16 – OTHER INFORMATION

**This MSDS contains only safety-related information. For other data see product literature.**

**Acronyms:**

**ADG Code** Australian Code for the Transport of Dangerous Goods by Road and Rail  
**AICS** Australian Inventory of Chemical Substances  
**CAS number** Chemical Abstracts Service Registry Number  
**Hazchem Number** Emergency action code of numbers and letters that provide information to emergency services especially firefighters  
**IARC** International Agency for Research on Cancer  
**NOHSC** National Occupational Health and Safety Commission  
**SUSDP** Standard for the Uniform Scheduling of Drugs & Poisons  
**UN Number** United Nations Number

**CONTACT POINT:**

Police and Fire Brigade: Dial 000  
**National Poisons Information Centre:** Dial **13 11 26 (from anywhere in Australia)**  
For 24 hour emergency response: Dial 0439 933 556  
Ask for Murray Goodlich