MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name:	**Kenso Agcare LV MCPA 500 Herbicide**
Product Type:	Group I Herbicide
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:	For selective control of certain weeds in agricultural crops as listed in the Directions for Use table on the label.

SECTION 2– COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	**CAS number**	**Proportion**
MCPA (present as the 2-ethyl hexyl ester)	94-74-6	50% w/v
Aromatic solvent and inert ingredient	secret	To 100 % w/v

SECTION 3– HAZARDS IDENTIFICATION

Hazard Classification: Hazardous substance. Non-Dangerous Goods. Hazard classification according to criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.

Risk Phrase(s): R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R65 Harmful: may cause lung damage if swallowed.

Safety Phrase(s): S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children
S36 Wear suitable protective clothing
S37 Wear suitable gloves
S46 If swallowed, seek medical advice immediately and show this container or label

ADG Classification: None allocated

UN Number: None allocated

Other Information: Poison Schedule S6

SECTION 4 – FIRST AID MEASURES

Swallowed	If swallowed, do not induce vomiting, seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.
Eye	If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a Doctor; or for at least 15 minutes and transport to Doctor or Hospital.
Skin	If skin or hair contact occurs, immediately remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until

	advised to stop by the Poisons Information Centre or a Doctor; or for 15 minutes and transport to Doctor or Hospital.
Inhaled	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. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

Advice to Doctor:
Treat symptomatically. If vomiting occurs, solvent present may cause pulmonary pneumonitis.

SECTION 5 – FIRE FIGHTING MEASURES

Specific Hazards
Combustible liquid

Fire Fighting Further Advice
On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Hazchem Code:
Not applicable

Suitable Extinguishing Media
If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills & Disposal
Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal. Dispose of at a landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.

Personal Protection
For appropriate personal protective equipment (PPE), refer Section 8.

Clean-up Methods – Large Spillages
Place damaged containers in recovery bins (if available) and return to manufacturer.

Environmental Precautions
This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Use earthen bunds or absorbent bunding to prevent spreading of spillage.

SECTION 7 – HANDLING AND STORAGE

Handling
Avoid skin and eye contact and inhalation of vapour, mist or aerosols.
Storage
Storage in a cool, dry, well-ventilated place and out of direct sunlight. Store below 30ºC. Keep containers closed when not in use – check regularly for leaks.
Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

National occupational exposure limits:
No value assigned for this specific material by the National Occupational Health and Safety Commision (NOHSC Australia)

Biological Limit Values:
As per the "National Model Regulations for the Control of Workplace Hazardous Substances [NOHSC: 1005 (1994)]" the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures:
Use only in well ventilated areas. Keep containers closed when not in use.

Personal Protection Equipment:
OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.
Wear overalls, chemical goggles and impervious gloves. Available information suggests that gloves made from poly vinyl chloride (PVC) should be suitable for intermittent contact. However, due to variations in glove constructions and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. If risk of inhalation of exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1716.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Clear reddish brown liquid
Odour:	Ammoniacal odour
Boiling point (°C):	Not available
Vapour Pressure:	Not available
Specific Density:	1.25 $\pm$ 0.01
Flashpoint:	Non flammable
Flammability Limits:	Non flammable
Solubility in Water:	Completely soluble

SECTION 10 – STABILITY AND REACTIVITY

Chemical stability: This material is stable under normal use and storage conditions.
Conditions to avoid: No information available.
Incompatible Materials: Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-D acid and largely de-activate the product and cause blockages in spray equipment. The addition of a strong alkali such as caustic soda will cause release of dimethylamine vapour. Dimethylamine is moderately toxic, LD50 (oral, rat) is 700 mg/kg and a TLV of 10 ppm (TWA) has been set.
Hazardous Reactions: Keep away from strong oxidising agents.
Hazardous Polymerization: Hazardous polymerization is not possible.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicology:

2,4-D (dichlorophenoxyacetic acid)	LD_{50} (oral, rat) 699 mg/kg LD_{50} (dermal, rabbit) >2,000 mg/kg LC_{50} (inhalation, rat) >1.79 mg/L (4hr)
Dimethylamine	LD_{50} (oral, rat) 700 mg/kg

Diethanolamine	LD_{50} (oral, rat) 710 mg/kg

Other information:
The Australian Acceptable Daily Intake (ADI) for 2,4-D for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.0 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, September
2006). In trials using 2,4-D as a drug, studies on volunteers have shown that doses of between 5 and 36 mg/kg body weight do not cause any acute toxic effects. Formulated 2,4-D products can be absorbed by ingestion, inhalation (spray mist) and through the skin. Studies of users (sprayers) has shown that absorption through the skin is the most common route. When used with good agricultural spraying practice and good personal hygiene, absorption of 2,4-D is very low.

SECTION 12 – ECOLOGICAL INFORMATION

Known Harmful Effects on the Environment

2,4-D amine products do not appear to pose any threat to birds.
2,4-D amine products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.

Environ. Protection Spray drift can cause damage, read the label for more information.

Acute Toxicity – Fish

Not toxic to fish. LC_{50} (96 hr) for (rainbow trout) is ~100 mg/l.

Acute Toxicity – Daphnia

LC_{50} (48hr) for 2,4-D amines is 184 mg/l.

Acute Toxicity – Other Organisms

Birds: Not toxic to birds. LD_{50} for (mallard ducks) is >1000 mg/kg
Bees: Not toxic to bees. LD_{50} 104.5 µg/bee.

Sewage Treatment

Not inhibitory in sewage system, 2,4-D is rapidly biodegraded.

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:	None Allocated
Proper Shipping Name:	None Allocated
ADG Class:	None Allocated
Hazchem Code:	None Allocated
Packing Group:	None Allocated

SECTION 15 – REGULATORY INFORMATION

Poison schedule	S5
Packaging & Labelling	CAUTION 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