

MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name: Kenso Agcare MCPA 750 Selective 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 the selective control of broadleaf weeds in cereal, linseed, pastures, sugar cane and turf as per Directions for Use Table.

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification: Hazardous according to criteria of NOHSC Australia.
Risk Phrase(s): R22 Harmful if swallowed.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
Safety Phrase(s): S2 Keep out of reach of children.
S13 Keep away from food, drink and animal feeding stuffs.
S20 When using, do not eat and drink.
S26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.
S36 Wear suitable protective clothing.
S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show this MSDS or label.
S24/25 Avoid contact with skin and eyes.
S37/39 Wear suitable gloves and eye/face protection.
SUSDP Classification: S6
ADG Classification: None allocated. Not a dangerous good under the ADG Code.
UN Number: None allocated.

Emergency Overview

Physical Description & colour: Clear red-brown liquid.
Odour: Ammoniacal odour.
Major Health Hazards: Symptoms in humans from very high acute exposure could include slurred speech, twitching, jerking and spasms, drooling, low blood pressure, and unconsciousness. This product may cause serious damage to eyes, harmful if swallowed, skin irritant.

Potential Health Effects

Health Effects No LD₅₀ information is available for this product.

Acute:

- Swallowed:** Harmful. This product is an oral irritant. Symptoms may include burning sensation and reddening of skin in mouth and throat. Other symptoms may also become evident, but all should disappear once exposure has ceased.
- Eye:** Cause irritation. Symptoms may include stinging and reddening of eyes and watering which may become copious. Other symptoms such as swelling of eyelids and blurred vision may also become evident. If exposure is brief, symptoms should disappear once exposure has ceased. However, lengthy exposure or delayed treatment is likely to cause permanent damage.
- Skin:** Cause irritation. Symptoms may include itchiness and reddening of contacted skin. Other symptoms may also become evident, but all should disappear once exposure has ceased.
- Inhaled:** This product is not harmful. Product may be mildly irritating, although unlikely to cause anything more than mild transient discomfort.

Chronic:

Not available

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
MCPA (present as dimethylamine salt)	94-74-6	750 g/L
Inert ingredient	secret	To 100%

SECTION 4 – FIRST AID MEASURES

Swallowed	If swallowed, do not induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or seek medical advice immediately.
Eye	Hold the eyes and flush immediately with plenty of water until the product is removed. Seek medical advice if irritation develops.
Skin	Remove contaminated clothing and wash affected areas or skin with soap and water. Seek medical advice if irritation develops.
Inhaled	Remove to fresh air, keep warm and at rest. Give artificial respiration or oxygen if breathing is shallow or stopped. Get medical attention immediately.

Advice to Doctor:

Treatment is symptomatic.

SECTION 5 – FIRE FIGHTING MEASURES

- Fire/Explosion Hazards:** There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.
- Dangerous decomposition:
or Combustion products** May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.
- Extinguishing Media:** Not combustible. Use extinguishing media suited to burning materials.
- Fire Fighting:** if a significant quantity of this product is involved in a fire, call the fire brigade.
- Flash Point:** Will not burn until water component is driven off.
- Upper Flammability Limit:** Does not burn.
- Lower Flammability Limit:** Does not burn.
- Autoignition Temperature:** Does not burn.
- Flammability Class:** Does not burn.

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. On-site disposal of concentrate is not acceptable.
Personal Protection:	For appropriate personal protective equipment (PPE), refer to Section 8.
Clean-up Methods - Large Spillages:	Place damaged containers in recovery bins (if available) and return to manufacturer. If large liquid spills occur, try to create a dike to stop material spreading or going into drains or waterways. Avoid using sawdust or other combustible material. Sweep up and shovel or collect recoverable product into labeled containers for recycling or salvage, and dispose of promptly. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services.
Environmental Precautions:	This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

SECTION 7 – HANDLING AND STORAGE

Handling:	Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also avoid contact or contamination of product with incompatible materials listed in Section 10.
Storage:	This product is a Schedule Poison. Observe all relevant regulations regarding sale, transport and storage of this class of poison. Make sure that containers of this product are kept tightly closed. Make sure that the product does not come into contact with incompatible materials listed in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging – there may be further storage instructions on the label.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

National Exposure Standards:	No exposure standards have been set for this product or the active ingredients.
Engineering Controls:	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment:	When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length rubber gloves and face shield or goggles.
Hygiene Measures:	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Clear red-brown liquid
Odour:	Ammoniacal odour
Boiling point (°C):	Not applicable

Vapour Pressure:	Not applicable
Specific Density:	1.176 ± 0.01
Flashpoint:	Non flammable
Flammability Limits:	Non flammable
Solubility in Water:	Completely soluble

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:	This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.
Stability:	Stable under normal conditions.
Hazardous Polymerization:	Hazardous polymerization is not possible.
Conditions to Avoid:	This product should be kept in a cool place, preferably below 30°C.
Incompatible Materials:	Reaction of the concentrate or spray mix with acids will precipitate solid MCPA acid and largely de-activate the product and cause blockage in spray equipment. The addition of a strong alkali such as caustic soda will cause release of dimethylamine vapour. Dimethylamine is moderately toxic, LD ₅₀ (oral, rat) is 700 mg/kg and a TLV of 10 ppm (TWA) has been set.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicology Information:

No harmful effects are expected if the precautions on the label and this MSDS are followed.

Toxicity Data:

Acute oral LD₅₀ for rats: 700 – 1160 mg/kg

Acute oral LD₅₀ for mice: 550 – 800 mg/kg

Acute dermal LD₅₀ for rats: >1000 mg/kg

Acute dermal LD₅₀ for rabbits: >4000 mg/kg

Symptoms in humans from very high acute exposure could include slurred speech, twitching, jerking and spasms, drooling, low blood pressure, and unconsciousness.

Chronic toxicity:

Dietary levels of approximately 50 mg/kg/day and 125 mg/kg/day over 7 months caused reduced feeding rates and retarded growth rates in rats. White blood cell counts and ratios were not affected, but some reductions in red blood cell counts and hemoglobin did appear to be associated with exposure to MCPA at oral dose levels of approximately 20 mg/kg/day. In the same study, oral doses of approximately 5 mg/kg/day caused increased relative kidney weights, and oral doses of approximately 20 mg/kg/day caused increased relative liver weights. Another study in rats showed no effects on kidney or liver weights over an unspecified period at oral doses of 60 mg/kg/day, but oral doses of 150 mg/kg/day did cause reversible increases in these weights over a course of 3 months. Very high dermal doses of 500 mg/kg/day caused reduced body weight, and even higher dermal doses of 1000 and 2000 mg/kg/day resulted in increased mortality and observable changes in liver, kidney, spleen and thymus tissue.

Reproductive effects:

A two-generation rat study at doses of up to 15 mg/kg/day affected reproductive function. Even smaller amounts of the compound were toxic to the foetuses. Dogs receiving relatively small amounts of MCPA (8 and 16 mg/kg) for 13 weeks showed adverse sperm and testes changes. It is unlikely that humans will experience these effects under normal exposure conditions.

Teratogenic effects:

Offspring of pregnant rats fed low to moderate doses of MCPA (20 to 125 mg/kg) on days 6 to 15 of gestation, had no birth defects. However, when the ethyl ester form of MCPA was fed to pregnant rats (2 to 100 mg/kg/day on days 8 to 15 of gestation), cleft palate, heart defect, and kidney anomalies were observed in the offspring. Mice fed 5 to 100 mg/kg/day of MCPA on days 6 to 15 showed significantly reduced foetal weight and delayed bone development at the highest dose. Teratogenic effects in humans are unlikely at expected exposure levels.

Mutagenic effects:

MCPA is reportedly weakly mutagenic to bone marrow and ovarian cells of hamsters, but negative results were reported for other mutagenic tests. It was negative in a bacterial test system (both with and without metabolic activation), negative in spot tests, and negative in host-mediated tests. It produced no detectable increase in chromosomal aberrations in house flies. Some irregularities occurred in gene transfer during cell

division in brewers yeast, although at levels which caused massive cell death. It appears that the compound poses little or no mutagenic risk.

Carcinogenic effects:

All of the available evidence on MCPA indicates that the compound does not cause cancer. Forestry and agricultural workers occupationally exposed to MCPA in Sweden did not show increased cancer incidence.

Organ toxicity:

Target organs identified in animal studies include the liver, kidneys, spleen and thymus. Farm worker exposure has resulted in reversible anemia, muscular weakness, digestive problems, and slight liver damage.

Fate in human and animals:

MCPA is rapidly absorbed and eliminated from mammalian systems. Rats eliminated nearly all of a single oral dose within 24 hours, mostly through urine with little or no metabolism. In another rat study, three quarters of the dose was eliminated within 2 days. All was gone by the 8 days. Humans excreted about half of a 5 mg dose in the urine within a few days. No residues were found after day 5. Cattle and sheep fed low to moderate doses of MCPA in the diet for 2 weeks showed no residues from levels less than about 18 mg/kg. The major metabolite of MCPA is 2-methyl-4-chlorophenol in the free and conjugated form, which is formed in the liver.

SECTION 12 – ECOLOGICAL INFORMATION

Mobility:	Rapid degradation in soil prevents significant downward movement under normal conditions.
Known Harmful Effects: on the Environment	MCPA dimethylamine salt products do not appear to pose any threat to birds. MCPA dimethylamine salt products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.
Other Precautions:	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Environmental Protection:	Spray drift can cause damage, read the label for more information.
Acute Toxicity – Fish	LC ₅₀ (96 hr) for young rainbow trout is 50 mg/l for MCPA dimethylamine salt
Acute Toxicity – Daphnia	EC ₅₀ (48 hr) for daphnia is >190 mg/l for MCPA dimethylamine salt.
Acute Toxicity – Algae	LC ₅₀ for algae is >392 mg/l
Acute Toxicity – Other Organisms	Birds: Not toxic to birds. LD ₅₀ for bobwhite quail is 270 mg/kg Bees: Not toxic to bees. LD ₅₀ >200 µg/bee.

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.
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SECTION 14 – TRANSPORT INFORMATION

ADG Code:	This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.
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SECTION 15 – REGULATORY INFORMATION

Poisons Schedule	S6
Packaging & Labeling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category	Harmful, Irritant
AICS (Australian)	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