

MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name: Kenso Agcare Fluroken 200 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 control of a wide range of broadleaf weeds in fallow, lucerne, maize, millets, pastures, poppies, sorghum, sugar cane, sweetcorn, winter cereals. Also used for the control of woody weeds in agricultural non-crop areas, commercial and industrial areas, forests, pastures and rights-of-way, as specified on the label.

SECTION 2 – HAZARDS IDENTIFICATION

Classified as hazardous according to criteria of NOHSC.

Risk Phrases: R36/38 Irritating to eyes and skin.
R43 May cause sensitization by skin contact.
R50 Very toxic to aquatic organisms.

Safety Phrases: S2 Keep out of reach of children.
S20/21 When using do not eat, drink or smoke.
S29/56 Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

SUSDP Classification: S5
ADG Classification: None allocated. Not a Dangerous Good.
UN Number: None allocated

Emergency Overview

Physical Description & colour: Clear, brown to black liquid.
Odour: Solvent odour.
Potential Health Effects: May irritate eyes and skin. May cause allergic disorders.

Potential Health Effects

Health Effects

Acute:

Swallowed: The oral LD₅₀ (rat) is above 5000mg/kg (low toxicity).

Eye: May cause temporary, moderate eye irritation.

Skin: The acute LD₅₀ (rabbit) is above 2000mg/kg (low toxicity).

Inhaled: The acute inhalation toxicity is low. Prolonged exposure to the solvent vapour from the concentrate may cause eye and respiratory irritation, headache, dizziness and narcotic effects.

Chronic:

Rats and mice administered the active ingredient showed no increase in tumours over control groups. Studies on rats and rabbits showed Fluroxypyr does not increase birth defects or interfere with reproduction, nor cause genetic changes. Fluroxypyr does not accumulate in the body. The ingredients are not listed as carcinogenic in NOHSC's document "Exposure Standards for Atmospheric Contaminants in the Occupational Environment" (May 1995).

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
Fluroxypyr-methyl heptyl ester	81406-37-3	30 % w/v
Inert ingredients	secret	10% w/v
Liquid hydrocarbon	64742-94-5	To 100 %

SECTION 4 – FIRST AID MEASURES

Swallowed	If swallowed, DO NOT induce vomiting. Give a glass of water. Seek medical advice immediately.
Eye	If in eyes, flush eyes immediately with plenty of fresh water for at least 15 minutes while holding the eyelids open.
Skin	If on skin, remove contaminated clothing, wash skin with plenty of soap and water. See a doctor if any signs or symptoms described in this document occur.
Inhaled	If affected, remove to fresh air until recovered. See a doctor if discomfort or irritation continues.

Advice to Doctor:

This product contains petroleum solvents. If lavage is performed, endotracheal or oesophagoscopy control is advisable.

SECTION 5 – FIRE FIGHTING MEASURES

Fire fighting equipment

Use positive-pressure, self-contained breathing apparatus and full protective equipment.

Extinguishing Media

Foam, carbon dioxide or dry chemical.

Special Fire Fighting Procedures

When fighting fires involving significant quantities of this product, wear safety boots, non-flammable overalls, gloves, hat, goggles and self contained breathing apparatus. All skin areas should be covered. Ensure that no spillage enters drains or water courses.

Unusual Fire & Explosion Hazards

This is a combustible liquid. There is a moderate risk of an explosion from this product if it is involved in a fire. Fire decomposition products from this product may form toxic and corrosive mixtures in confined spaces.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills

Small spill: Apply absorbent material such as earth, sand or clay granules or cat litter to the spill. Sweep up material for disposal when absorption is complete and contain in a refuse vessel for Disposal (See Disposal). If necessary, wash the spill area with an alkali detergent and water and absorb as above the wash liquid for disposal.

Large spill: Place leaking containers into salvage drums. Apply absorbent material such as earth, sand or cat litter to the spill area. Form a barricade around spill and in front of drains or waterways in spill vicinity, using earth or other available material. Sweep up material and contain in a refuse vessel for disposal (see Disposal).

Disposal

Triple rinse or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling container, replace cap and return clean containers to recycler or designated collection point. If not recycling break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 7 – HANDLING AND STORAGE

Storage and Transport

This product is an S5 Poison. Store in the closed original container in a dry, cool, well-ventilated area, out of direct sunlight. Do not store near food, feedstuffs, fertilisers or seed. Observe all relevant regulations of sale, transport and storage of this class of product.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards

A time weighed average (TWA) concentration for an 8 hour day, and 5 day week has not been established by The National Occupational Health & Safety Commission for any of the major ingredients in this product. There is a blanket limit of 10mg/m³ for dusts or mists when limits have not otherwise been established. The nature of this product makes it unlikely that this level will be approached in normal use. The ADI (Acceptable Daily Intake) for Fluroxypyr is set at 0.02mg/kg/day. The corresponding NOEL (No-observable-effect-level) is set at 20mg/kg/day. Values taken from Australian ADI List, January, 2001.

Engineering Control

In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high; you are advised to modify the process or environment to reduce the problem.

Personal Protection

Avoid contact with eyes and skin. When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves, a face shield or goggles. Wash hands after use and wash face before eating, drinking or smoking. After each day, wash glove, face shield or goggles and contaminated clothing.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid
Colour: Brown to black colour

Odour:	Solvent odour
Boiling point (°C):	N/A
Flashpoint:	67 °C (PMCC)
Specific Gravity:	0.98 g/mL at 20 °C
Vapour Pressure:	135x10 ⁻³ mPa at 20 °C (Fluroxypyr methylheptyl ester)
Corrosiveness:	Not corrosive
Solubility in water mg/L	Emulsifiable (Active ingredient has solubility of about 1 at 25 °C)

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability

Stable under normal conditions.

Hazardous Decomposition Products

In fire noxious/irritating gases may be formed including oxides of carbon, oxides of nitrogen, hydrogen chloride and hydrogen fluoride.

Hazardous Polymerization

Not known to occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity – Oral LD₅₀ (rat) >5,000 mg/kg

Acute Toxicity – Dermal LD₅₀ (rabbit) >5,000 mg/kg

Acute Toxicity – Inhalation LC₅₀ (rat) (4hr) >5.5 mg/l

Systemic (Other Target Organ) Effects

Fluroxypyr did not cause birth defects in laboratory animals. Has been toxic to the foetus in laboratory at doses toxic to the mother.

Reproductive Effects

Fluroxypyr, in animal studies, did not interfere with reproduction.

Mutagenicity

For the active ingredient, in-vitro and animal genetic toxicity were negative.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity Data

Fluroxypyr methyl heptyl ester has low toxicity to birds, honey bees and earth worms, and moderate toxicity to fish and aquatic organisms. Fluroxypyr methyl heptyl ester is rapidly degraded to Fluroxypyr acid which has low toxicity to fish, birds, honey bees, livestock and aquatic organisms. Fluroxypyr will not bio-accumulate in animal systems.

Environmental Fate

Fluroxypyr methyl heptyl ester is almost completely degraded to Fluroxypyr acid within one week in soil and water. Fluroxypyr acid is primarily degraded by microbial action. It has a half-life of about 3 to 6 days in soil under aerobic conditions depending on soil type and climatic conditions. In sterile water, Fluroxypyr acid has a half-life of 185 to 265 days depending on the pH. Fluroxypyr is not expected to move into ground water. Residues typically remain in the top 10 centimetres of a soil profile. If used according to the label directions, Fluroken 200 Herbicide will not be harmful to the environment.

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

U.N. Number	None Allocated
DG Class	None Allocated
Hazchem Code	None Allocated
Packing Group	None Allocated
Storage and Transport	Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

SECTION 15 – REGULATORY INFORMATION

Poisons Schedule	S5
Packaging & Labelling	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category	Harmful, Irritant
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.

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