SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name:	**Kenso Agcare Mungo 224 Herbicide**
Product Type:	Group G Herbicide
Company Name:	Kenso Corporation (M) Sdn Bhd
Address:	Level 1, 98 Commercial Road, Teneriffe, 4005 QLD.
Telephone Number:	(07) 3216 1188
Facsimile Number:	(07) 3216 0388
Emergency Telephone Number:	000 (Police or Fire Brigade) **13 11 26 (Poisons Information Centre)**
Use:	For the selective control of certain broadleaf weeds and grasses in mung beans, peanuts, soybeans, green beans and seed crops of Siratro and Stylo as specified in the DIRECTIONS FOR USE table.

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification: Classified as non-hazardous according to criteria of Safe Work Australia. Not classified as a Dangerous Good according to the ADG Code.

GHS Signal Word: **WARNING**

Hazard statements:
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H410: Very toxic to aquatic life with long lasting effects.

Prevention:
P264: Wash contacted areas thoroughly after handling.
P273: Avoid release to the environment.
P280: Wear protective gloves, protective clothing and eye or face protection.

Response:
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P321: Specific treatment (see FIRST AID on this label).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P391: Collect spillage.

Disposal:
P501: Dispose of contents and containers as specified on the registered label.

SUSMP Classification: S6
ADG Classification: None allocated. Not a dangerous good.
UN Number: None allocated.

Emergency Overview

Physical Description & colour: Clear yellow to red liquid.
Odour: sweet odour.
Major Health Hazards: May irritate the eyes and skin.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
Acifluorfen (present as sodium salt)	62476-59-9	22.4%
Other non-hazardous ingredients	secret	30 – 60%
Water	7732-18-5	To 100%

SECTION 4 – FIRST AID MEASURES

General Information:
If poisoning occurs, contact a doctor or Poisons Information Centre (Tel: 131126).

Inhalation:	First aid is generally not required. However if inhalation occurs, remove to fresh air, keep warm and at rest. If in doubt, contact Poison Information Centre or doctor.
Skin contact:	Remove contaminated clothing and wash affected area or skin with soap and water. Seek medical advice if irritation develops.
Eye contact:	Hold the eyes open and flush immediately with plenty of water. Remove contact lenses if present and easy to do so. Seek medical advice if irritation develops.
Ingestion:	Rinse mouth with water. Give plenty of water to drink. Do NOT induce vomiting. Seek medical assistance.

Advice to Doctor:
Treatment is symptomatic.

SECTION 5 – FIRE FIGHTING MEASURES

Fire/Explosion Hazard
There is no risk of an explosion from this product if under normal circumstances if it is involved in fire.
Dangerous decomposition or Combustion Products
Thermal decomposition
Product is likely to decompose only after heating to dryness, followed by further strong heating. Fire decomposition products may be toxic if inhaled. Take suitable protective measures.

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. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Fire-fighter should wear appropriate protective equipment with self-contained breathing apparatus.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills and Disposal
Ensure suitable personal protection during removal of spillage. 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. Do not allow to enter drains, sewers and watercourses. 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.
Personal Protection
For appropriate personal protective equipment (PPE), refer Section 8.

SECTION 7 – HANDLING AND STORAGE

Handling
Keep minimum exposure to this product. When handling this product, do not eat, drink or smoke. Avoid contact with eyes and skin. When opening container, preparing spray and using the prepared spray, wear appropriate personal protective equipment.
After each days use, wash gloves, face shield or goggles and overalls.
Storage
Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. Keep away from contact with fertilisers and seeds.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:
No exposure standards have been set for this product. ADI for acifluorfen is set at 0.01 mg/kg/day with corresponding NOEL is set at 1 mg/kg/day.
**ADI= Acceptable Daily Intake; NOEL: No Observable Effect Level. Data adopted from Australia ADI List, March 2016.*
Engineering Controls
Well-ventilated area.
Personal Protection
Avoid contact with eyes and skin. Protective glasses or googles is recommended when using this product. Wear suitable impervious elbow-length gloves, face protection and protective clothing made from rubber or PVC during handling. No respirator is necessary when using this product.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Clear Yellow to Red
Odour:	Sweet odour
pH:	8 - 10
Vapour Pressure:	2.37 kPa @ 20°C
Specific Gravity:	1.17± 0.01
Flashpoint:	Non flammable
Solubility:	Soluble in water

SECTION 10 – STABILITY AND REACTIVITY

Reactivity
Stable under normal conditions of handling and storage.
Conditions to Avoid
Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.
Incompatibilities
Strong acids, strong bases and strong oxidizing agents.
Fire Decomposition
This product is likely to decompose after heating to dryness, followed by further strong heating. Carbon dioxides, and if combustion is incomplete, carbon monoxide and smoke. Water is also formed. May formed hydrogen fluoride gas and other compounds of fluoride and sodium compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgement and unconsciousness followed by coma and death.
Polymerisation
This product will not undergo polymerisation reactions.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicity data (of aqueous technical)
Acute Toxicity – Oral
LD_{50} for rats: 1590 mg/kg body weight
Acute Toxicity – Dermal
LD_{50} for rabbits: >2000 mg/kg body weight
Acute Toxicity – Inhalation
LC_{50} (4hr) for rats: >6.91 mg/L air

Potential Health Effects

Health Effects
May irritate the eyes and skin. Avoid contact with eyes and skin.
Acute:

Inhalation: Significant inhalation exposure is considered unlikely. Available data indicates that this product is not harmful and unlikely to cause any discomfort or irritation.

Skin contact: Product presents no hazards in normal use. However product may be irritating but unlikely to cause anything more than mild transient discomfort.

Eye contact: Product may be irritating to eyes but is unlikely to cause anything more than mild transient discomfort.

Ingestion: Significant ingestion exposure is considered unlikely. Product is unlikely to cause any irritation.

Reproductive Toxicity
No adverse effects were observed in rodents or their offspring when the parents were fed daily doses of acifluorfen well below lethal levels. Body weights, food consumption, fertility and pregnancy were comparable in both treated and untreated animals. However in another study, at higher doses, both parents and offspring suffered kidney lesions and death. This suggests levels high enough to cause toxicity in the mother are needed to affect reproduction.

Mutagenicity
Acifluorfen products do not caused mutations in various mutagenesis assays on both bacteria and mammalian cells.

Carcinogenicity
Insufficient data to characterize carcinogenicity as only one study of mice fed with high doses of acifluorfen for 18 months shows decreases in body weight and increases in both benign and malignant liver tumors.

Other Information
The Australian Acceptable Daily Intake (ADI) for acifluorfen is set at 0.01 mg/kg/day with corresponding NOEL is set at 1 mg/kg/day. Values taken from Australia ADI List, March 2016.

SECTION 12 – ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

Ecotoxicity data (of technical)
Acute Toxicity – Bird
LD_{50} bobwhite quail: 325 mg/kg
Acute Toxicity – Fish
LC_{50} (96 hr) for rainbow trout: 17 mg/L
LC_{50} (96 hr) for bluegill sunfish: 62 mg/L
EC_{50} (48h) for Daphnia: 77 mg/L
EC_{50} (48h) for *Selenastrum capricornutum*: >260 µg/L
Use not expected to resuly in honeybee exposure, test not performed.

ENVIRONMENTAL FATE
Acifluorfen sodium moderately quickly degraded forming mainly bound residue and high polar metabolites depending on soil types. Microbial activities occur during degradation, as well as photolytic degradation on soil surface. Residue accumulation in soil does not occur. In water, acifluorfen sodium is hydrolytically stable in dark but degrade rapidly in light mainly forming CO_2.

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. Not a dangerous good.
Hazchem Code:	None allocated.
Packing Group:	None allocated.

SECTION 15 – REGULATORY INFORMATION

SUSMP Classification	S6
Packaging & Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING

SECTION 16 – OTHER INFORMATION

This SDS 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
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
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number
GHS	Globally Harmonised System

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