

## SAFETY DATA SHEET

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

**Product Name:** Fiestar Non-Selective Herbicide  
**Company Name:** Kenso Corporation (M) Sdn Bhd  
**Address:** 2 Bond Crescent, Forrest Hill,  
Auckland 0620 New Zealand  
**Telephone Number:** (09) 410 0861  
**Emergency Telephone Number:** (24 Hours) 0800 243 622  
**National Poisons & Hazchem Information Centre :** 0800 POISON (0800 764 766)  
**Use:** For control of a wide range of grasses, broad-leaved weeds and clovers.

### SECTION 2 – HAZARDS IDENTIFICATION

**Hazard classification:** 3.1D, 6.1D, 6.3B, 6.4A, 6.8B, 6.9A, 9.1D, 9.2A, 9.3C  
**Priority Identifier:** HARMFUL  
KEEP OUT OF REACH OF CHILDREN  
**Secondary Identifiers:** 3.1 D = Combustible liquid – keep away from naked flame.  
6.1D = May be harmful if swallowed, inhaled or absorbed through the skin.  
6.3B = Harmful – may cause skin irritation.  
6.4A = Harmful – may cause eye irritation.  
6.8B = Harmful – may cause reproductive/development damage from repeated oral exposure.  
6.9A = Toxic – presumed to/may cause target organ damage from repeated oral exposure at high doses.  
9.1D = Toxic to aquatic organisms.  
9.2A = Very toxic to the soil environment.  
9.3C = Harmful to terrestrial vertebrates.

### SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
Glufosinate-ammonium	77182-82-2	20 % w/v
Inert ingredients	secret	30-60 % w/v
Water	7732-18-5	To 100%

### SECTION 4 – FIRST AID MEASURES

Swallowed:	If swallowed, do not induce vomiting; seek medical advice immediately.
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. Discard contaminated non-waterproof shoes and boots. Wash contaminated clothing before re-wearing.
Eyes:	Flush eyes immediately with plenty of fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. However, if irritation persists, see a doctor.
Inhaled:	Remove to fresh air until recovered. See a doctor if discomfort or irritation continues.

**Advice to Doctor**  
Treat symptomatically.

## SECTION 5 – FIRE FIGHTING MEASURES

### Fire/Explosion Hazard

#### Dangerous decomposition or Combustion Products

##### Thermal decomposition

Not a fire or explosion hazard

##### Hazardous decomposition products

In a fire, irritant and toxic fumes containing oxides of carbon, nitrogen, phosphorus and sulphur and other toxic substances may be generated.

##### Hazardous reactions

None known

##### Extinguishing Media

Extinguish fire with foam, dry powder, carbon dioxide or water spray.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

### Spills and Disposal

Contain spill and absorb with sand or proprietary absorbent (vermiculite). Prevent from entering drains, waterways or sewers. Clean up spill immediately. Collect in sealed open-top containers for disposal. Triple rinse containers, and add rinsings to the spray tank, then offer container for recycling / reconditioning, or puncture top, sites and bottom and dispose of in landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.

## SECTION 7 – HANDLING AND STORAGE

### Handling:

Keep out of reach of children. Avoid contact with eyes and skin. Avoid inhalation of spray mist. When mixing or applying, wear protective clothing as described in section 8. Do not eat, drink or smoke while using. Wash hands and face after use. Wash protective clothing after use.

### Storage:

Store in a place accessible by authorized persons only. Keep containers tightly closed in a cool, well-ventilated place. Keep away from strong oxidizing agents. The storage temperature should not exceed 20 - 30°C.

## SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Exposure Limits

NOHSC Exposure Standards:

Propylene glycol monomethyl ether (1-methoxy-2-propanol)

TLV-TWA 100 ppm, 369 mg/m<sup>3</sup>

TLV-STEL 150 ppm, 553 mg/m<sup>3</sup>

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Exposure standard – Short term exposure limit (STEL) means a 15 minute TWA exposure which should not be exceeded at any time during the working day.

### Engineering Control

Control process conditions to avoid contact. Use only in well-ventilated areas. If necessary, use local exhaust ventilation to keep airborne concentration below the exposure limits.

### Protective Equipment

Poisonous if swallowed. Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including elbow-length PVC gloves and face shield. If product contacts skin, immediately

wash area with soap and water. After each use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. Wash gloves, face shield and contaminated clothing before reuse.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Form:</b>	Liquid
<b>Colour:</b>	Blue liquid
<b>Odour:</b>	Odourless
<b>pH:</b>	5.2-6.2 in 5% solution
<b>Melting point (°C):</b>	NA
<b>Boiling point (°C):</b>	96 °C
<b>Specific Gravity:</b>	1.11
<b>Vapour Pressure:</b>	Low
<b>Flammability Limits:</b>	NA
<b>Solubility</b>	Soluble in water

## 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.

**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, strong oxidising agents. Ammonia may be evolved in the presence of alkalis.

**Fire Decomposition:** Ammonia. In a fire, oxides of carbon, nitrogen, phosphorus and sulphur may be emitted.

**Polymerisation:** This product will not undergo polymerisation reactions.

## SECTION 11 – TOXICOLOGICAL INFORMATION

### Acute:

Oral toxicity LD<sub>50</sub> female rat: 1910 mg/kg (product)

LD<sub>50</sub> male rat: 2170 mg/kg (product)

Dermal toxicity LD<sub>50</sub> female rat: 1380 mg/kg (product)

LD<sub>50</sub> male rat: 1400 mg/kg (product)

Inhalation toxicity LC<sub>50</sub> female rat: 4.31 mg/L (4 hr) (product)

LC<sub>50</sub> male rat: 3.22 mg/L (4 hr) (product)

Skin irritation Slightly irritating (rabbit) (product)

Eye irritation Moderately irritating (rabbit) (product)

Sensitisation Non-sensitising (guinea pig) (product)

### Chronic:

In animal studies glufosinate-ammonium showed no teratogenic, carcinogenic, mutagenic or neurotoxic effects.

## SECTION 12 – ECOLOGICAL INFORMATION

Glufosinate-ammonium is practically non-toxic to birds, fish, honeybees, earthworms and beneficial insects. It is practically non-toxic to Daphnia, but moderately toxic to sensitive aquatic species. It is expected to be slightly to moderately toxic to wild animals. DO NOT contaminate streams, rivers or waterways with the used containers.

### **Ecotoxicity**

Glufosinate-ammonium:

Fish toxicity: LC<sub>50</sub> (96 h) rainbow trout 710 mg/L  
LC<sub>50</sub> (96 h) carp, bluegill sunfish, golden orfe > 1000 mg/L  
Bird toxicity: Eight day dietary LC<sub>50</sub> Japanese quail > 5000 mg/kg  
Daphnia toxicity: Daphnia magna EC<sub>50</sub> (48 h) 560 – 1000 mg/L  
Algal toxicity: LD<sub>50</sub> for Scenedesmus subspicatus ≥ 1000 mg/L  
LD<sub>50</sub> for Scenedesmus capricornutum 37 mg/L

**Environmental fate, persistence and degradability, mobility**

Glufosinate-ammonium is very soluble in water and is hydrolytically and photolytically stable. It is rapidly degraded in surface levels of soils and in water. This product is considered to be readily biodegradable. The potential for groundwater contamination with glufosinate-ammonium is minimal. Glufosinate-ammonium does not accumulate in the fatty tissues of fish or other animals.

**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  
**Hazchem Code:** None Allocated  
**Packing Group:** None Allocated

**SECTION 15 – REGULATORY INFORMATION**

**HSNO Approval Number:** HSR000152  
**HSNO Controls (inc. Tracking and Record Keeping):** See [www.epa.govt.nz](http://www.epa.govt.nz) for approval conditions.  
**ACVM Registration:** P8141  
**ACVM Controls:** See [www.footsafety.govt.nz](http://www.footsafety.govt.nz) for registration conditions.

**SECTION 16 – OTHER INFORMATION**

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

**CONTACT POINT:**

Police and Fire Service:	Dial	111
<b>National Poisons &amp; Hazchem Information Centre:</b>	<b>Dial</b>	<b>0800 POISON (0800 764 766)</b>