SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name:	**Ken-Up 500 Flexi Herbicide**
Company Name:	Kenso Corporation (M) Sdn Bhd
Address:	2 Bond Crescent, Forrest Hill, Auckland 0620 New Zealand
Telephone Number:	(09) 410 0861
Hazardous Substances	
Emergency Telephone Number:	**0800 CHEMCALL (0800 243 622)**
National Poisons Information Centre:	**0800 POISON (0800 764 766)**
Use:	A non-selective, non-residual herbicide suitable for use in drains and aquatic areas and for general use in agriculture, horticulture, forestry and non-cropland areas.

SECTION 2 – HAZARD IDENTIFICATION

Hazard classification: 6.3B, 8.3A, 9.1B
Priority Identifier: KEEP OUT OF REACH OF CHILDREN
Secondary Identifiers: 6.3 B = May cause skin irritation.
8.3A = May cause eye irritation.
9.1B = Toxic to aquatic organisms.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	**CAS number**	**Proportion**
Glyphosate (as Isopropylamine Salt)	38641-94-0	50 % w/v
Inert Ingredient	secret	<10% w/v
Water	7732-18-5	to 100% w/v

SECTION 4 – FIRST AID MEASURES

Swallowed	Rinse mouth with water. Give plenty of water to drink. Do NOT induce vomiting. Seek medical assistance.
Eye	Hold the eyes and flush immediately with plenty of water. 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 Hazard
Dangerous decomposition or Combustion Products
Thermal decomposition
Not a fire or explosion hazard

Hazardous decomposition products
None known

Hazardous reactions
DO NOT mix, store or apply the product or spray solutions of the product in galvanised steel or unlined steel (except stainless steel) containers or spray tanks. The product or spray solutions of the product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture that can flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source. Spray solutions of the product should be mixed, stored and applied only in stainless steel, aluminium, fibreglass, plastic and plastic-lined steel containers.

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

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills and Disposal
Ensure suitable personal protection (including respiratory protection) during removal of spillage. Contain spill and absorb with sand or other absorbent material. Do not allow to enter drains, sewers and watercourses. Collect in sealed container for disposal. Triple rinse containers, add rinsings to spray tanks and send containers for recycling (Agrecovery) or if not recycle, break, crush or puncture and bury empty containers in a local authority landfill or in accordance with local authority regulation. Do not dispose of undiluted chemicals on site.

SECTION 7 – HANDLING AND STORAGE

Storage:
Keep out of reach of children. Store in the original, tightly closed container, in a secure area away from human and animal foodstuffs, seeds, fertilisers, food packaging, human/animal remedies/medicines.

Handling and Use: 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. This product should only be mixed, contained in or sprayed by, equipment made from stainless steel, fibreglass, plastic, aluminium, brass or copper. A highly flammable gas (hydrogen) may be formed from the contact of this product with galvanised or unlined steel. All spray equipment, including pumps, spray tanks, lines, nozzles, and landing gear (aircraft) should be thoroughly washed with water after each day of spraying.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:
None established for formulated product or its components

Engineering Controls:
Well ventilated

Personal Protection:
Avoid contact with eyes and skin. Do not inhale spray mist. When preparing spray solution, wear chemical resistant coveralls, gauntlet gloves footwear and goggles or face-shield. If contact of spray mist is likely wear respiratory protection to a minimum of level of "Organic Vapour" specification. After use and before eating, drinking and smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face and contaminated clothing.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Clear blue liquid
Odour:	Slight ammoniacal odour
Boiling point (°C):	Not applicable
Vapour Pressure:	Not applicable
Specific Density:	1.22 $\pm$ 0.01
Flashpoint:	Non flammable
Flammability Limits:	Non flammable
Solubility in Water:	Completely soluble

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability:	This product is unlikely to react or decompose under normal storage conditions.
Conditions to Avoid:	This product should be kept in a cool place, preferably below 30^0C.
Incompatibilities:	No particular incompatibilities.
Fire Decomposition:	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Oxides of phosphorus and other phosphorus compounds. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest. Hydrogen cyanide gas acts very rapidly; symptoms and death can both occur quickly.
Polymerization:	This product is unlikely to undergo polymerisation.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicity data:

Glyphosate isopropylamine salt technical
Acute oral LD_{50} for rat: 5600 mg/kg
Acute dermal LD_{50} for rabbits: >5000 mg/kg

LC_{50} (96 hr) for rainbow trout: 8.2 – 26 mg/L
LC_{50} (96 hr) for bluegill sunfish: 5.8 – 14 mg/L
LD_{50} for bees: > 0.1 mg/kg

Other Information

The Australian Acceptable Daily Intake (ADI) for glyphosate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 30 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, August 2003).

SECTION 12 – ECOLOGICAL INFORMATION

Known Harmful Effects on the Environment

Technical glyphosate acid is practically nontoxic to fish and may be slightly toxic to aquatic invertebrates.

Other Precautions
Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.

Environ. Protection
Glyphosate is a non-selective contact herbicide. Spray drift can cause damage.

Persistence / Degradability
Adsorption studies indicate that glyphosate has very low mobility. Average field half life of glyphosate is 47 days.

Acute Toxicity - Fish
The following data is for the formulated product.
Not toxic to fish.
LC_{50} (96 hr) for rainbow trout is >989 mg/l.
LC_{50} (96 hr) for carp is >895 mg/l.

Acute Toxicity – Other Organisms
Birds: Not toxic to birds. LD_{50} for mallard ducks and bobwhite quail (diet) is >5620 mg/kg
Bees: Not toxic to bees. LD_{50} >100 µg/bee.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal: Dispose of tank rinsate in accordance with normal application practices. Disposal of contaminated clean-up materials and/or undiluted material must be through an approved Hazardous Substances disposal service or facility. Advice regarding the disposal of this product can be sourced from the relevant local authority. In most circumstances this product may be disposed of in approved local authority land fills.

SECTION 14 – TRANSPORT INFORMATION

UN Number (Sea Transport): 3082

IMO Proper Shipping: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains GLYPHOSATE, 50%), Class 9, Packing Group III.

SECTION 15 – REGULATORY INFORMATION

HSNO Approval Number: HSR101039
HSNO Controls (inc. Tracking and Record Keeping):
See http://www.epa.govt.nz for controls.
ACVM Registration: P9123
ACVM Controls:
See 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
National Poisons Information Centre:	Dial	0800 POISON (0800 764 766)
Hazardous Substances Emergency Telephone Number:	Dial	0800 CHEMCALL (0800 243 622)