

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY

Product Name: Kenso Agcare Ken-Star 450 Herbicide
Product Type: Group 4 Herbicide
Company Name: Kenso Corporation (M) Sdn Bhd
Address: Level 1, 98 Commercial Road, Teneriffe, 4005 QLD.
Telephone Number: (07) 3216 1188
Emergency Telephone Number: 000 (Police or Fire Brigade)
13 11 26 (Poisons Information Centre)
Use: For the control of emerged broadleaf weeds prior to sowing crops and pastures in conservation tillage situations and for selective weed control in crops and situations detailed in the Directions For Use.

SECTION 2 – HAZARDS IDENTIFICATION

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



Classification of the Hazardous Chemical: Acute toxicity (Oral) – Category 4
Skin sensitization – Category 1
Serious eye damage/eye irritation – Category 1
Specific target organ toxicity (Single exposure) – Category 3
Reproductive toxicity – Category 1
Hazardous to the aquatic environment, long-term – Chronic 2

GHS Signal Word: **DANGER**

Hazard statements: H302: Harmful if swallowed.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.
H335: May cause respiratory irritation.
H360: May damage fertility or the unborn child.
H411: Toxic to aquatic life with long lasting effects.
Prevention: P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
P264: Wash contacted areas thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only in outdoors or in a well-ventilated area
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.

Response:	P280: Wear protective gloves, protective clothing and eye or face protection. P301+P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313: IF exposed or concerned: Get medical advice/attention. P310: Immediately call a POISON CENTER or doctor/physician. P312: Call a POISON CENTER or doctor/ physician if you feel unwell. P321: Specific treatment (see FIRST AID on this label) P330: Rinse mouth. P333+P313: If skin irritation or rash occurs: Get medical advice/attention. P362+P364: Take off contaminated clothing and wash it before reuse.
Storage:	P391: Collect spillage. P403 + P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up.
Disposal:	P501: Dispose of contents and containers as specified on the registered label.
SUSMP Classification:	S6
ADG Classification:	Not dangerous good.
UN Number:	None allocated.

Emergency Overview

Physical Description & colour: Clear reddish brown liquid.

Odour: Ammoniacal odour.

Major Health Hazards: The oral LD₅₀ of 2,4-D ranges from 375 to 666 mg/kg in the rat, 370 mg/kg in mice, and from less than 320 to 1000 mg/kg in guinea pigs. The dermal LD₅₀ values are 1500 mg/kg in rats and 1400 mg/kg in rabbits, respectively. In humans, prolonged breathing of 2,4-D causes coughing, burning, dizziness, and temporary loss of muscle coordination. Other symptoms of poisoning can be fatigue and weakness with possible nausea. On rare occasions following high levels of exposure, there can be inflammation of the nerve endings with muscular effects.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
2,4-D (present as Isopropylamine salt)	5742-17-6	45%
Inert ingredients	secret	to 100%

SECTION 4 – FIRST AID MEASURES

Inhalation:	Remove to fresh air, keep warm and at rest. Give artificial respiration or oxygen if breathing is shallow or stopped. Get medical attention immediately.
Skin contact:	Remove contaminated clothing and wash affected areas or skin with soap and water. Seek medical advice if irritation develops.
Eye contact:	Hold the eyes and flush immediately with plenty of water. Seek medical advice if irritation develops.
Ingestion:	If swallowed, and if more than 15 minutes from a hospital induce vomiting, preferably using Ipecac Syrup APF. Seek medical advice immediately.

Advice to Doctor:

Treatment is symptomatic.

SECTION 5 – FIRE FIGHTING MEASURES

Fire/Explosion Hazard

Dangerous Decomposition or Combustion Products

Thermal 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 sulphur (sulphur dioxide is a respiratory hazard) and other sulphur compounds. Most will have a foul odour. Hydrogen chloride gas, other compounds of chlorine. 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.

Incompatibilities

Strong acids, strong bases, strong oxidising agents.

Hazardous Decomposition Products

None known

Hazardous Reactions

None known

Extinguishing Media

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

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills & Disposal

Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled 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. Full

details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

SECTION 7 – HANDLING AND STORAGE

Handling

When handling this product, do not eat, drink or smoke.

When mixing this product always wear a PVC or rubber apron, elbow length PVC gloves, face shield or goggles and overalls buttoned at the wrist and neck.

When spraying this product, wear a face shield or goggles

After each days use, wash gloves, face shield or goggles and overalls.

If product gets on skin, immediately wash area with soap and water.

Storage

Store in the closed, original container in a well-ventilated area as cool as possible out of direct sunlight. Keep from contact with fertilisers and seeds.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:

None established for formulated product

Ingredient	TWA mg/m ³
2,4-D Acid	10

Engineering Controls:

Well ventilated

Personal Protection:

Avoid contact with eyes and skin. Do not inhale spray mist. When preparing spray solution, wear PVC/rubber apron or cotton overalls buttoned to the neck and wrist, elbow-length PVC gloves and goggles or face-shield. 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 reddish brown liquid
Odour:	Ammoniacal odour
Boiling Point (°C):	About 100 °C
Vapour Pressure:	16 mm Hg (water)
Specific Density:	1.15 ± 0.01
Flashpoint:	Non flammable
Solubility:	Soluble in water

SECTION 10 – STABILITY AND REACTIVITY

Hazardous Polymerization

Hazardous polymerisation is not possible.

Materials to Avoid

Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-D acid and largely deactivate the product and cause blockages in spray equipment. The addition of a strong alkali such as caustic soda will cause release of mono-isopropylamine vapour. Mono-isopropylamine is moderately toxic, LD₅₀ (oral, rat) is 820 mg/kg and a TLV of 5 ppm (TWA) has been set.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity – Oral

Acute oral LD₅₀ for rats: > 500 mg/kg

Acute Toxicity – Dermal

Acute dermal LD₅₀ for rats: > 2000 mg/kg

Potential Health Effects

Health Effects

No LD₅₀ information is available for this product.

Acute:

Inhalation: Irritation to respiratory system

Skin contact: Cause irritation

Eye contact: Cause irritation

Ingestion: Harmful

Chronic:

Not available

Other information:

ADI for 2,4-D is set at 0.05 mg/kg/day. The corresponding NOAEL is set at 5 mg/kg/day. *ADI means Acceptable Daily Intake and NOAEL means No-observable-adverse-effect-level. Values taken from Australia ADI list, September 2024.*

SECTION 12 – ECOLOGICAL INFORMATION

Known Harmful Effects on the Environment

2,4-D products do not appear to pose any threat to birds.

2,4-D products do not appear to pose any threat to fish or other aquatic organisms other than in very high concentrations.

Acute Toxicity – Fish

LC₅₀ (96 hr) for (rainbow trout) is >100 mg/l.

Acute Toxicity – Daphnia

LC₅₀ (48 hr) for (daphnia) is 184 mg/l for 2,4-D (2,4-dichlorophenoxyacetic acid) dimethylamine salt.

Acute Toxicity – Other Organisms

Not toxic to bees.

LD₅₀ for (mallard duck) is >500 mg/kg

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

ADG

UN Number: 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains 2,4-D)
Class: 9
Packaging group: III
Hazchem: 3Z
Storage and Transport: Considered non dangerous for road and rail transport (in packaging) by the Australian Code for Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.

IMO-IMDG

UN Number: 3082
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains 2,4-D)
Class: 9
Packaging group: III
Marine pollutant: Yes

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

1800 951 288

03 9573 3188