

MATERIAL SAFETY DATA SHEET**SECTION 1 – IDENTIFICATION OF THE CHEMICAL PRODUCT AND COMPANY**

Product Name: Kenso Agcare Token 240 Selective Herbicide
Product Type: Group A 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 Wild Oats, Paradoxa Grass (Annual Phalaris), Canary Grass and Annual Ryegrass in Wheat. Highly active on Wild Oats and can be mixed with many broadleaf herbicides.

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification: Hazardous according to criteria of NOHSC Australia.
Risk Phrase(s): R65 Harmful: May cause lung damage if swallowed.
 R20/21/22 Harmful by inhalation, in contact with skin, and if swallowed.
 R36/38 Irritating to eyes and skin.
Safety Phrase(s): S20 When using, do not eat or drink.
 S38 In case of insufficient ventilation, wear suitable respiratory equipment.
 S46 If swallowed, contact a doctor or Poison Information Centre immediately and show this container or label.
 S24/25. Avoid contact with skin and eyes.
SUSDP Classification: S6
ADG Classification: None allocated. Not a dangerous good.
UN Number: None allocated.

Emergency Overview

Physical Description & colour: Brown liquid
Odour: Aromatic solvent odour
Major Health Hazards: No major health hazard is known.

Potential Health Effects**Health Effects*****ACUTE***

Toxicity - This product is slightly hazardous (WHO Hazard Class III)

Swallowed: **LOW TOXICITY**
 Tests on rats using an almost identical Token 240 EC formulation indicate low toxicity following single oral doses of the undiluted product.
 (LD50 > 2,276 mg/kg)

Dermal absorption: **LOW TOXICITY**
 Tests on rats using an almost identical Token 240 EC formulation indicate low toxicity due to skin contact with the undiluted product.
 (LD50 > 4,000 mg/kg)

Inhaled: **LOW TOXICITY**
 Tests on rats using a similar Token 240 EC formulation indicate low toxicity due to inhalation of the undiluted product.
 (LC50 (4 h) > 3,500 mg/m³)
 (Based on studies with rabbits)

Irritation -

Eye: **MODERATE IRRITANT**Skin: **MODERATE IRRITANT**

Skin Sensitisation - (Based on test with guinea pigs using an almost identical Token 240 EC formulation)

POTENTIAL SKIN SENSITISER (ie contact allergenic material)

CHRONIC

Clodinafop-propargyl technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, teratogenic or reproductive effects was obtained. **Clodinafop-propargyl technical** induced liver toxicity and benign and malignant liver tumours in mice fed high daily doses over their lifetime. Rats fed high doses showed mild liver toxicity but did not develop tumours while no liver effects were observed for dogs fed high doses. The liver tumour finding occurring at high doses is believed due to **clodinafop-propargyl** inducing proliferative effects genetically pre-existing in mice and has no relevance to humans because the cellular changes which underlie it are rodent-specific and have been shown experimentally not to occur in primates.

Cloquintocet-mexyl technical has been extensively tested and no evidence of mutagenic, carcinogenic, teratogenic, or reproductive effects was obtained.

The **aromatic hydrocarbon mixture** may cause central nervous system depression and narcosis.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS number	Proportion
Clodinafop-propargyl	105512-06-9	258 g/L
Cloquintocet-mexyl	99607-70-2	64.5 g/L
Stabilisers and surfactant		balance

SECTION 4 – FIRST AID MEASURES

Swallowed	If swallowed and if more than 15 minutes from a hospital, induce vomiting preferably using Ipecac Syrup (APF).
Eye	If product gets in eyes, wash it out immediately with water. Seek medical attention.
Skin	Remove contaminated clothing and wash affected areas thoroughly with soap and water.
Inhaled	Move affected person to fresh air and keep at rest until recovered.

Advice to Doctor

No specific antidote exists. Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Fire/Explosion Hazard

This product is non-flammable and non-explosive. The product may burn if involved in a fire. Extinguish warehouse and factory fires using fine-water spray or foam. During a fire this product may release smoke and hazardous decomposition products. When fighting a major fire wear an air-supplied respirator. Do not allow fire-water to enter drains.

Dangerous decomposition or Combustion Products

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 sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds.

Thermal decomposition

None

Hazardous decomposition products

Can decompose at high temperatures forming toxic gases.

Extinguishing Media

Use carbon dioxide, dry chemical, foam, water fog.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills and Disposal

In case of spillage it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways

Procedure for spill:

- (1) Keep all bystanders away.
- (2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.
- (3) Reposition any leaking containers so as to minimise leakage.
- (4) Dam and absorb spill with an absorbent material (eg. sand or soil).
- (5) Shovel the absorbed spill into drums.
- (6) Disposal of the absorbed material will depend upon the extent of the spill.
 - For quantities up to 50L of product bury in a secure landfill site.
 - For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate spill area using hydrated lime.

Dispose of empty, used containers by:

- (a) Triple rinsing or preferably pressure rinsing containers with water. Add the rinsings to the spray tank mix. DO NOT dispose of undiluted chemicals on site.
- (b) If recycling, replace cap and return clean containers to recycler or designated collection point.
- (c) 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 500 mm 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

Store in tightly sealed original containers in a dry secure place away from fertilisers, feed and food. Store out of direct sunlight. Keep out of reach of children, unauthorised persons and animals.

Transport

Considered non-hazardous by Australian Code for the Transport of Dangerous Goods by Road and Rail.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:

The manufacturer of the **aromatic hydrocarbon mixture** recommends an occupational exposure limit of 100 ppm total hydrocarbon. This level is unlikely to be reached under normal usage of this product. No other exposure standards have been set for the components of this product.

Exposure Potential - Swallowing is unlikely under normal conditions of usage. Skin uptake of **clodinafop-propargyl technical** and **cloquintocet-mexyl technical** can occur. Inhalation of spray mist is a possible route of exposure. This product is diluted with water prior to use as a spray. This diluted form is less toxic by all routes of exposure.

Re-entry Period - Do not enter treated areas without protective clothing until the spray has dried.

Engineering Controls:

No special requirements. Product is used outdoors.

Personal Protection:

- Eyes: Wear goggles.
Clothing: Wear cotton overalls buttoned to the neck and wrist and a washable hat.
Gloves: Wear elbow-length butyl rubber gloves.
Respiratory: Wear face shield.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Brown liquid
Odour:	Aromatic solvent odour
Boiling point (°C):	Not applicable
Vapour Pressure:	Not applicable
Specific gravity:	1.10 at 20°C
Flashpoint:	> 70 °C (closed cup)
Flammability Limits:	Non flammable
Solubility in Water:	Miscible with water

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability:	This product is stable under normal storage conditions.
Conditions to Avoid:	Avoid extreme heat.
Incompatibilities:	Avoid acids, alkalis, strong oxidising agents.
Hazardous Polymerization:	Hazardous polymerization is not possible.

SECTION 11 – TOXICOLOGICAL INFORMATION

Clodinafop-propargyl technical is practically non-toxic to birds, crustaceans, earthworms, soil microorganisms and bees, and highly toxic to fish [LC50 (96 h) = 0.4 mg/L for rainbow trout]. The formulated product is moderately toxic to fish and aquatic invertebrates [LC50 (96 h) = 4.9 mg/L for trout].

Cloquintocet-mexyl technical is practically non-toxic to birds, fish, crustaceans, earthworms, soil microorganisms and bees.

SECTION 12 – ECOLOGICAL INFORMATION

Known Harmful Effects on the Environment

Other Precautions

None

Environ. Protection

DO NOT contaminate streams, rivers or waterways with Token 240 Selective Herbicide or the used containers.

Persistence / Degradability

Not persistent in soil or water. Low to moderate mobility in soil. Sinks in water (after 24h).

This product is toxic to aquatic organisms. Insufficient data to be sure of status.

Clodinafop-Propargyl:

Bees LC₅₀/EC₅₀ > 100 µg/bee

Invertebrates (Water Flea) LC₅₀/EC₅₀ > 2.0 ppm

Fish (Trout) LC₅₀/EC₅₀ 0.39 ppm Fish (Bluegill) LC₅₀/EC₅₀ 0.21 ppm

Birds (8-day dietary - Bobwhite Quail) LC₅₀/EC₅₀ > 5,200 ppm

Birds (8-day dietary - Mallard Duck) LC₅₀/EC₅₀ > 5,200 ppm

Clodinafop-Propargyl: Liver, skin, bone marrow

Cloquintocet-Mexyl: Eye, skin, lung, digestive tract

Petroleum Solvent: Respiratory tract, stomach, liver, thyroid, urinary bladder, CNS, skin

n-Methylpyrrolidone: Eye, skin

Clodinafop-Propargyl:

Daphnia magna 21 days EC₅₀ 0.43 mg/l Rainbow Trout 21 days NOEC 0.12 mg/l

Environmental Fate, persistence and degradability, mobility

No data available for the formulation. The formulation presented here is for the active ingredient, clodinafop-propargyl. Low bioaccumulation potential.

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
SUSDP Classification:	S6
ADG Class:	None allocated. Not a dangerous good.
Hazchem Code:	None allocated.
Packing Group:	None allocated.

SECTION 15 – REGULATORY INFORMATION
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SUSDP Classification	S6
Packaging & Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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.

Acronyms:	
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
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
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number

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