

## SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** Conquest Spike 240 EC Herbicide

**Other Names:** Carfentrazone-ethyl.

**Use:** For improvement in the control of marshmallow and certain other broadleaf weeds prior to establishment of broadacre crops, fallows, in commercial, industrial and public service areas, and around agricultural buildings and yards, in tank mixture with knockdown herbicides; for the control of marshmallow and annual nettles in grass pastures and rough grass/turf areas; control of volunteer cotton seedlings including Roundup Ready cotton and desiccation of cotton re-growth as per the Directions For Use Table.

**Company:** Conquest Crop Protection Pty Ltd.

**Address:** Level 1, 4 Collingwood Street, Osborne Park WA 6017

**Telephone Number:** 08 9347 0500

**Fax Number:** 08 9347 0551

**Emergency Telephone Number:** 1800 033 111 (All hours - Australia wide).

## SECTION 2 HAZARDS IDENTIFICATION

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

**Risk phrases:** R65 Harmful: May cause lung damage if swallowed.

**Safety Phrases:** S2 Keep out of reach of children.  
S13 Keep away from food, drink and animal feeding stuffs.  
S23 Do not breathe vapour or spray.  
S24/25 Avoid contact with skin and eyes.  
S37/39 Wear Suitable gloves and eye/face protection.  
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this MSDS or label.

## SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients:**

<b>CHEMICAL</b>	<b>CAS NUMBER</b>	<b>PROPORTION</b>
Carfentrazone- ethyl	128639-02-1	240g/L
Liquid Hydrocarbon	64742-94-5	736 g/L
N-methyl pyrrolidone	872-50-4	20 g/L
Other ingredients (considered non-hazardous)		0 – 10%

## SECTION 4 FIRST AID MEASURES

### **FIRST AID**

**Swallowed:** If swallowed, do not induce vomiting: seek medical advice immediately and show this MSDS or label. Try to prevent vomit from entering the lungs by careful placement of the patient.

**Eye:** If in eyes, hold eyes open and flush gently with copious amounts of water. If irritation occurs and persists, obtain medical attention.

**Skin:** If on skin wash with soap and water. Remove contaminated clothing. If irritation occurs and persists see a doctor.

**Inhaled:** Remove patient to fresh air. If breathing discomfort occurs, obtain medical attention.

**Advice to Doctors:** Carfentrazone-ethyl has low acute toxicity. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care. Treat symptomatically, mainly for hydrocarbon solvent ingestion. If the product has been aspirated into the lungs (ie. from vomiting), consider the possibility of chemical pneumonitis.

## SECTION 5 FIRE FIGHTING MEASURES

**Specific Hazard:** Product is a combustible liquid. Flash point > 62°C.

**Extinguishing media:** Foam, CO<sub>2</sub> or dry chemical. Soft stream water fog if no alternatives. Contain all runoff.

**Hazards from combustion products:** On burning will emit toxic fumes.

**Precautions for fire-fighters and special protective equipment:** Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Emergency procedures:** Isolate and post spill area. Wear prescribed protective clothing and equipment. Large spills should be dyked or covered to prevent dispersal. Vacuum shovel or pump spilled material into an approved container and dispose of as listed below.

**Material and methods for containment and cleanup procedures:** To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected. Dispose of waste as indicated below or according to Australian Standard 2507 - Storage & Handling of Pesticides. Wear protective clothing such as full body cover barrier suit, eg. a rubber rain suit. Keep out unprotected persons and animals.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

## SECTION 7 HANDLING AND STORAGE

**Precautions for Safe Handling:** Harmful if inhaled. May irritate the nose and throat. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Do not inhale vapour or spray mist. When preparing the product for use and using the product wear elbow length chemical resistant gloves. When opening the container, mixing and loading and preparing spray, wear cotton overalls, over normal clothing, buttoned to the neck and wrist and face shield or goggles. If applying by hand wear cotton overalls, over normal clothing, buttoned to the neck and wrist and face shield or goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use.

**Conditions for Safe Storage:** Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in a room or place away from children, animals, food or feed stuffs.

This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### **National Exposure Standards:**

No exposure standard has been established by Safe Work Australia. However the manufacturer recommends an occupational exposure limit of 100 mg/m<sup>3</sup> (15 ppm) TWA, as total hydrocarbon.

### **Biological Limit Values:**

No biological limit allocated.

### **Engineering controls:**

Use in well ventilated area only. Use local exhaust at all process locations where vapour may be emitted. Ventilate all transport vehicles prior to unloading. Keep containers close when not in use.

### **Personal Protective equipment (PPE):**

When preparing the product for use and using the product wear elbow length chemical resistant gloves. When opening the container, mixing and loading and preparing spray, wear cotton overalls, over normal clothing, buttoned to the neck and wrist and face shield or goggles. If applying by hand wear cotton overalls, over normal clothing, buttoned to the neck and wrist and face shield or goggles.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Brown coloured liquid.
<b>Boiling point:</b>	Not available.
<b>Freezing point:</b>	Not available.
<b>Specific Gravity:</b>	1.1 g/mL.
<b>pH:</b>	2.5 – 6.5.
<b>Solubility in Water:</b>	Product emulsifies in water. (carfentrazone-ethyl = 42 ppm).
<b>Flammability:</b>	Combustible liquid (C1).
<b>Corrosive hazard:</b>	Non corrosive; compatible with stainless steel containers & polyethylene used in spray tanks and parts.
<b>Flashpoint (°C):</b>	> 62°C.
<b>Flammability Limits (%):</b>	Not established.
<b>Poisons Schedule:</b>	Product is a schedule 5 poison.

## SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Spike 240 EC is considered stable in ambient conditions.

**Conditions to avoid:** Avoid excessive sources of heat and naked flames.

**Incompatible materials:** Strong oxidising agents.

**Hazardous decomposition products:** When the product is heated to high temperatures, thermal decomposition may generate toxic and noxious fumes, including carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride and hydrogen fluoride.

**Hazardous reactions:** No particular reactions to avoid. Will not polymerise.

## SECTION 11 TOXICOLOGICAL INFORMATION

### **Potential Health Effects:**

Studies with laboratory animals have shown this product to have low oral, dermal and inhalation toxicity. Symptoms of overexposure to carfentrazone-ethyl shown by laboratory animals include decreased activity, tearing eyes, bleeding from the nose and incoordination.

### **Acute**

**Swallowed:** The product has low toxicity; the oral LD<sub>50</sub> in the rat is > 3000 mg/kg.

**Eye:** Mildly irritating to the eyes.

## SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

- Skin:** This product has a low dermal toxicity. The dermal LD<sub>50</sub> in the rabbit is > 4000 mg/kg. Skin contact may result in irritation with a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.
- Inhaled:** This product has low inhalation toxicity. LC<sub>50</sub> = > 10.4 mg/L/4 hour.

**Chronic:** In studies with laboratory animals, carfentrazone-ethyl did not cause reproductive toxicity, teratogenicity or carcinogenicity. An overall absence of genotoxicity has been demonstrated in tests of mutagenicity, DNA damage and chromosomal aberrations.

## SECTION 12 ECOLOGICAL INFORMATION

**Environmental Information:** No data is available on Hammer 400EC Herbicide. Toxicity data is on the active constituent, Carfentrazone-ethyl.

**Environmental Toxicology:** Carfentrazone-ethyl is toxic to algae (EC<sub>50</sub> = 15 ppb), moderately toxic to fish (LC<sub>50</sub> 1.6 to 2 mg/L) and slightly toxic to aquatic crustacean (LC<sub>50</sub> = > 9.8 mg/L). Carfentrazone-ethyl was shown to cause no effects to earthworms at concentrations up to 820 mg/kg in soil. Carfentrazone-ethyl is slightly toxic to birds (LD<sub>50</sub> > 2,250 mg/kg) and low toxicity to bees (no deaths at 200 µg/bee). Do not contaminate sewers, drains, dams, creeks or any other waterways with product or the used container.

**Environmental Properties:** Carfentrazone-ethyl is rapidly degraded in soils under aerobic and anaerobic conditions (half life = 1 to 2 days). Carfentrazone-ethyl rapidly hydrolyses at pH 9 but stable at pH 5. Field studies show that Carfentrazone-ethyl has a low potential for movement in the soil. The Log P of 3.36 and a measured bioconcentration factor of 206 in fish, indicate a low potential for accumulation. The low vapour pressure ( $1.19 \times 10^{-7}$  Torr) indicates that volatility is not a concern.

## SECTION 13 DISPOSAL CONSIDERATIONS

**Spills & Disposal:** Isolate and post spill area. Wear prescribed protective clothing and equipment. Large spills should be dyked or covered to prevent dispersal. Keep out animals and unprotected persons. Vacuum, shovel or pump waste into an approved drum. Dispose of waste as indicated below or according to Australian Standard 2507 - Storage & Handling of Pesticides. Wear protective clothing such as full body cover barrier suit, eg. a rubber rain suit.

Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

**Disposal of empty containers:** Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. 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, in compliance with relevant Local, State or Territory government regulations. Empty containers and product should not be burnt.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

## SECTION 14 TRANSPORT INFORMATION

**Road & Rail Transport:** This product is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail in containers less than 3000 litres. Bulk shipments should use UN 3082, as per below. This product is a Combustible Liquid (C1) for storage purposes.

**Marine and Air Transport:** Conquest spike 240 Ec Herbicide (Carfentrazone-ethyl) is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

## SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of Safe Work Australia. Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration Number 69885.

Product is not classified as a Dangerous Good according to the ADG Code. Product is a Dangerous Good according to the IMDG and IATA.

**Requirements concerning special training:**

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

## SECTION 16 OTHER INFORMATION

Issue Date: 21 May 2014. Valid for 5 years. (Revision to update minor changes).

**Key to abbreviations and acronyms used in this MSDS:**

ADG Code	Australian Dangerous Goods Code (for the transport of Dangerous Goods by Road and Rail).
ASCC	Australian Safety & Compensation Council (formally known as the National Occupational Health & Safety Commission (NOHSC)).
Carcinogen	An agent which is responsible for the formation of a cancer.
Genotoxic	Capable of causing damage to genetic material, such as DNA.
HSIS:	Hazardous Substances Information System.
Lacrimation:	The production, secretion, and shedding of tears.
Lavage:	A general term referring to cleaning or rinsing.
Mutagenic	Capable of inducing a genetic mutation in an organism.
NOHSC	National Occupational Health and Safety Commission.
Pneumonitis:	A general term that refers to inflammation of lung tissue.
PPE	Personal protective equipment.
Teratogen	An agent capable of causing abnormalities in a developing foetus.
TWA	The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

**References**

1. "Search Hazardous Substances". HSIS - Safe Work Australia website. (2012).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) No. 3.
4. The Australian Code for the Transport of Dangerous Goods by Road & Rail (7th Edition).

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

*End of MSDS*