

Section 1 - Identification of the Material and Supplier

FMC New Zealand Limited
6 Clayton Street
Newmarket, Auckland 1023

24 Hour Medical Emergency: 0800 111 174
Transport Emergency: 0800 387 668
Technical Query & Customer Service: 0800 658 080
(business hours)
www.fmccrop.nz

Chemical nature: Microencapsulated Carfentrazone-ethyl in a suitable medium.
Trade Name: Shark® Herbicide
Product Use: Herbicide
Creation Date: August, 2018
This version issued: November, 2018 and is valid for 5 years from this date.
Poisons Information Centre: Phone 0800 764766 from anywhere in New Zealand

Section 2 - Hazards Identification

Statement of Hazardous Nature

Hazard Classification: 3.1D, 6.3B, 6.4A, 6.9B, 9.1A, 9.2A
Required identification Details: WARNING, ECOTOXIC



HAZARD CLASSIFICATION:

H227: Combustible liquid.
H316: Causes mild skin irritation.
H319: Causes serious eye irritation.
H373: May cause damage to organs through prolonged or repeated exposure.
H410: Very toxic to aquatic life with long lasting effects.

PREVENTION

P102: Keep out of reach of children.
P103: Read label before use.
P210: Keep away from flames and hot surfaces. No smoking.
P261: Avoid breathing fumes, mists, vapours or spray.
P262: Do not get in eyes, on skin, or on clothing.
P264: Wash contacted areas thoroughly after handling.
P271: Use only 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.
P280: Wear protective gloves, protective clothing and eye or face protection.

RESPONSE

P312: Call a POISON CENTRE or doctor if you feel unwell.
P362: Take off contaminated clothing and wash before reuse.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+P313: If skin irritation or rash occurs: Get medical advice.
P391: Collect spillage.
P370+P378: In case of fire, use carbon dioxide, dry chemical, foam. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.

STORAGE

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P405: Store locked up.
P410: Protect from sunlight.
P402+P404: Store in a dry place. Store in a closed container.
P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc, g/L
Carfentrazone-ethyl	128639-02-1	60 g/L
Inert Ingredients		to 100%

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 0800 764 766 from anywhere in New Zealand and is available at all times. Have this SDS with you when you call.

Inhalation: Remove affected person to fresh air. If respiratory distress occurs or irritation persists for more than 30 minutes, seek prompt medical attention.

Skin Contact: If product comes into contact with skin wash with plenty of soap and water. Remove contaminated clothing. If irritation occurs and persists seek medical advice.

Eye Contact: If product comes into contact with eyes, hold eyes open, gently flood with water for at least 15 minutes. If any discomfort persists seek medical advice.

Ingestion: Call a Poisons Information Centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not induce vomiting or give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical advice.

Notes to physician: This product is expected to have low oral, dermal and inhalation toxicity. It is expected to be irritating to the eyes and skin. Note that there is a risk of pulmonary irritation or chemical pneumonitis if this product is aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place.

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: On burning will emit Carbon dioxide, Carbon monoxide and may release toxic fumes. Mixtures of toxic decomposition products may be produced upon combustion of this product in confined spaces.

HACHEM Code: 2X

Extinguishing Media: Foam, CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Unusual Fire or Explosion Hazards: Moderately combustible. When heated above the flashpoint, this material releases vapours which, when mixed with air, can burn or be explosive.

Hazards from combustion products: On burning will emit Carbon dioxide, Carbon monoxide and may release toxic fumes. Mixtures of toxic decomposition products may be produced upon combustion of this product in confined spaces.

Protection of fire-fighters: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or come into contact with smoke, gases or vapours generated.

Flash point: 63°C

Upper Flammability Limit: No data.

Lower Flammability Limit: No data.

Autoignition temperature: No data.

Flammability Class: Not flammable (GHS); C1 combustible (AS 1940)

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Section 6 - Accidental Release Measures

Accidental release

Personal precautions: Wear protective clothing and respiratory protection as prescribed in Section 8, below.

Environmental precautions: Isolate and post spill area. Remove nearby ignition sources (such as smoking, matches or open flames). Keep unprotected persons and animals out of the area.

Do NOT allow spilled product to enter sewers, drains, dams, creeks or any other waterways. Dike to confine spill and absorb with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into an approved container and clearly label for disposal.

Methods for cleaning up: Vacuum, shovel or pump waste into an approved container and clearly label for disposal. To clean and neutralise spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e., Methanol, Ethanol or Isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the containers of waste already collected. Repeat if necessary. Dispose of waste as in accordance with Local Regional Council by-laws.

Section 7 - Handling and Storage

Handling: Avoid skin and eye contact and breathing vapour.

Storage: Keep out of reach of children and animals. Store in a cool, dry, well-ventilated place. Store below 30°C, away from sources of extreme heat and open flames. Store in original containers only. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

Packaging materials: Fluorinated HDPE

Section 8 - Exposure Controls and Personal Protection

Workplace Exposure Guidelines

Workplace exposure standards: No exposure standard has been established for Carfentrazone-ethyl or this product formulation by NZ EPA. A blanket limit of 10 mg/m³ applies for dusts or mists when limits have not otherwise been established.

Application in the workplace: Not established

Exposure Standards outside the workplace: Not established

Engineering measures

Exposure control measures: Follow First Aid recommendations

Ventilation specification: Use local exhaust at all process locations where vapour or mist may be emitted. Ventilate all transport vehicles prior to unloading. In industrial situations, concentration values should not exceed the TWA. If the concentration of mists, dusts or vapours is becoming high, you are advised to modify processes or the environment to reduce the problem.

Personal Protective Equipment

Detail specifications for equipment: Depending upon concentrations encountered, wear coveralls or a long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear impermeable suit, such as Hypalon, Tyvek®, Saranex® or PVC. Launder all work clothing before reuse (separately from household laundry).

Respiratory system: For splash, mist or spray exposures wear, as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides (Australian Standards).

Skin and body: Wear chemical protective gloves made of materials such as nitrile or neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Hands: Wash hands after use.

Eye Protection: For splash, mist or spray exposure, wear chemical protective goggles or a face shield.

General hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the workday.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	Translucent liquid, yellow-orange in colour.
Odour:	Minimal odour.
Boiling Point:	Not available (liquid at normal temperatures).
Freezing/Melting Point:	No data.
Volatiles:	No data.
Vapour Pressure:	Negligible at ambient temperature and Pressure.
Vapour Density:	No data.
Specific Gravity or density:	0.931 g/cm ³ @ 20°C ± 0.5°C
Water Solubility:	Disperses in water to form an emulsion
pH:	4.86 @ 24°C (1% aqueous emulsion)
Volatility:	No data.

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Odour Threshold:	No data.
Evaporation Rate:	No data.
Coeff Oil/water Distribution:	No data.
Autoignition temp:	356°C
Oxidation properties:	Not an Oxidizer

Section 10 - Stability and Reactivity

Stability: Stable under recommended storage conditions.

Conditions to Avoid: Heat, flames and sparks.

Incompatible products: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon oxides

Section 11 - Toxicological Information

Acute toxicity

This product is expected to have low oral, dermal and inhalation toxicity. Carfentrazone-ethyl : Signs of toxicity in laboratory animals included tremors, abdominal gripping, mucoid anal discharge, bloody oral discharge, hypothermia, squinting eyes, lacrimation, and pink to orange-brown discoloration of urine.

Acute toxicity – Oral: LD50 (rat) >2000 mg/kg

Acute toxicity - Dermal: LD50 >2000 mg/kg

Acute toxicity – Inhalation: LC50 (rat) >6.92 mg/L (4h)

Skin irritation: This product may be a skin sensitizer. Expected to be mildly irritating.

Eye irritation: Expected to be moderately irritating

Inhalation: Expected to have low toxicity. Inhalation of aromatic hydrocarbon vapours (*content <2% w/v in formulation*) may cause dizziness, disturbances in vision, drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation.

Chronic Health Effects: No data is available for the formulation. 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 chromosome aberrations. Chronic exposure to aromatic hydrocarbons may cause headaches, dizziness, loss of sensations or feelings (such as numbness), and liver and kidney damage. Disturbances in hearing and balance have been reported in workers exposed to Butanol vapours. Exposure to Butanol vapours may produce headache, drowsiness and irritation of the nose and throat. Excessive exposure to Butanol vapours may result in contact dermatitis and irritation of the mucous membranes. Chronic exposure to Trimethylbenzene (*content <1% w/v in formulation*) may cause CNS changes, asthmatic bronchitis and blood dyscrasias.

Reproductive effects: Not a Reproductive toxin.

Mutagenic effects: Not Mutagenic.

Carcinogenic effects: Not a carcinogen.

Section 12 - Ecological Information

Ecotoxicity: No data is available for the formulation.

Environmental Data: No data available for the formulation. Carfentrazone-ethyl is rapidly degraded in soil (DT50 < 1.5 days) through microbial degradation, initially by hydrolysis to F8426-Chloropropionic acid, and then through further side-chain degradation to other acids. Based on field studies, carfentrazone-ethyl and its major metabolite, F8426-Chloropropionic acid, are confined to the top soil layer, indicating only slight mobility in soil. Carfentrazone-ethyl is hydrolytically unstable in base (half-life of 5.1 hours), with stability increasing with decreasing pH. It is susceptible to photolytic degradation in water, with a half-life of 8.3 days (pH 5). The Log Pow is 3.36 and the measured bio-concentration factor in whole fish is 159, both indicating a low potential for accumulation. Its vapour pressure is 1.19×10^{-7} torr, indicating that volatility is not a concern with this chemical.

Carfentrazone-ethyl: Care should be taken to avoid contamination of the aquatic environment as Carfentrazone-ethyl is a herbicide and is toxic to algae. In a test with earthworms, Carfentrazone-ethyl was shown to cause no effects at concentrations up to 820 mg/kg in soil. Carfentrazone-ethyl has low toxicity to bees (no death at 200 µg/bee).

Species	LD ⁵⁰	LC ⁵⁰	EC ⁵⁰
Algae	---	---	5.7 - 17 µg/L
Fish	---	1.6-2.0 mg/L	---
Aquatic crustacea	---	> 9.8 mg/	---

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Birds	> 2,250 mg/kg	> 5,620 ppm	---
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Section 13 - Disposal Considerations

Spills & Disposal: Do NOT allow product or wash solutions to enter sewers, drains, dams, creeks or any other waterways. Dispose of waste according to instructions in section 6.

Disposal of empty containers: Non-returnable containers that held this material should be cleaned, prior to disposal, by triple rinsing with water. Dispose of rinsings as indicated above. 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, vegetation and roots. Empty containers and product should not be burnt. Do not cut or weld metal containers. Vapours that form may create an explosion hazard.

Section 14 - Transport Information

NZS 5433*

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Carfentrazone-ethyl)
Class	9
Packing group	III
Matters needing attention for transportation:	Shark 1 and 5 L can be shipped under Limited Quantity provisions in NZS 5433 as a non-dangerous good.

IMDG*

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Carfentrazone-ethyl)
Class	9
Packing group	III

IATA*

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Carfentrazone-ethyl)
Class	9
Packing group	III

* Matters needing attention for transportation:

Marine Pollutants in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code and IATA special provision A197. If the product meets these special provisions, it may be shipped in New Zealand as a non-dangerous goods under provisions in NZS 5433 code which accepts IMDG and IATA classification and/or Limited quantity volumes.

Section 15 - Regulatory Information

ACVM Registered Number: P7808
HSNO Approval Code: HSR007883

Section 16 - Other Information

Date Issued: 5 March 2018

Replaces: ES324

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

Acronyms:

CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NOS	Not otherwise specified
NTP	National Toxicology Program (USA)
R-Phrase	Risk Phrase
UN Number	United Nations Number

THIS SDS 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 MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

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