

 Elliott Technologies  
**SAFETY DATA SHEET**

**Affinity Force<sup>®</sup>**

Date of Issue: 20 February 2009

**1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION**

**Chemical name of active ingredient(s):** Carfentrazone-ethyl  
**Recommended use:** Herbicide  
**Supplier:** Elliott Technologies Limited  
PO Box 838  
Pukekohe  
Phone 0800 100 325

**Emergency telephone number:** 0800 Poison (0800 764 766) 24 Hours

**2. HAZARDS IDENTIFICATION**

**Hazard Classification:** Toxic - 6.1E, 6.3B, 6.4A, 6.9B,  
Ecotoxic - 9.1A, 9.2A  
Toxic if ingested. Presumed to cause liver damage from repeated oral exposure at high doses. May cause lung damage if swallowed. May cause eye and skin irritation.  
Ecotoxic to aquatic life. Do not apply to bodies of water. Toxic to fish. Do not contaminate sewers, drains, dams, creeks or any other waterways with product or empty container.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Substance/preparation information on hazardous ingredients**

Common name	CAS No	%
Carfentrazone-ethyl	81777-89-1	24
Aromatic hydrocarbon	84742-94-5	24
Other ingredients determined to be non-hazardous.		Balance

**4. FIRST-AID MEASURES**

**Description of necessary first aid measures:**

**Effects and symptoms**

**First-aid measures**

**Inhalation:** Remove to fresh air. If breathing difficulty or discomfort occurs and persists, contact a medical doctor.

**Ingestion:** If swallowed, rinse mouth with water and give 1 or 2 glasses of water to drink. If any discomfort persists seek medical advice. Do NOT induce vomiting. Do not give liquids of any kind to an unconscious person.

**Skin contact:** Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

**Eye contact:**

Hold eye(s) and flush with water for at least 15 minutes. If irritation persists, obtain medical attention.

**Notes to a physician:**

This product has generally low acute toxicity. It is slightly irritating to the eyes and skin. Treatment is otherwise controlled removal of exposure followed by symptomatic and supportive care. This product contains aromatic hydrocarbons that can produce severe pneumonitis or fatal pulmonary oedema if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise controlled removal of exposures followed by symptomatic and supportive care.

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**5. FIRE-FIGHTING MEASURES****HAZCHEM Code:**

2X

**Extinguishing media :**

Foam, carbon dioxide or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

**Hazardous thermal (de)composition products:**

On burning, will emit toxic fumes of carbon monoxide, carbon dioxide, oxides of nitrogen etc.

**Protection of fire-fighters:**

Isolate fire area. Evacuate downwind. Wear full protective clothing and self contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

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**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Avoid contact with skin and eyes. Do not inhale spray. Wear protective clothing and equipment. Do not eat, drink or smoke when using. Wash hands and face before meals and after work.

**Environmental precautions:**

Isolate and post spill area. Large spills should be dyked or covered to prevent dispersal. DO NOT allow material to enter sewers or bodies of water. Keep unprotected persons and animals out of the area.

**Methods for cleaning up:**

Shovel or sweep up and dispose of in accordance with the requirements of the regional Council By-laws.  
To clean spill area, tools and equipment, wash with a solution of soap 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.

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**7. HANDLING AND STORAGE****Handling:**

Ensure containers are kept closed until using product. Avoid skin and eye contact. When opening the container and preparing or using the spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat and elbow-length PVC gloves and face shield or goggles. Wash hands after use.

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**Storage:**

Store in a cool, dry, well-ventilated place, out of direct sunlight. Do not use or store near heat. Keep out of reach of children and animals. DO NOT store near (or allow to contact) other pesticides, fertilizers, water, food or feed.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace Exposure Guidelines

**Workplace exposure standards:**  
**Exposure Standards outside  
the workplace:**

No exposure standard has been established.

### Engineering measures

**Exposure control measures:**

Use in well ventilated area only. Ventilate all transport vehicles prior to unloading. Keep containers closed when not in use.

### Personal Protective Equipment (PPE):

**Detail specifications for equipment:**

Work Clothing: Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length PVC gloves, head covering and impervious footwear.

Eye Protection: Wear chemical protective goggles or face shield.

Respiratory Protection: If inhalation risk exists, wear a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides.

Gloves: Wear chemical protective gloves when handling this product. Inspect regularly for leaks. Wash the outside of the gloves with soap and water prior to removal.

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.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State:</b>	Uniform milky solution.
<b>Colour:</b>	White
<b>Odour:</b>	Slightly aromatic odour.
<b>pH:</b>	3 – 5.5
<b>Vapour Pressure:</b>	
<b>Boiling Point:</b>	No data
<b>Freezing/melting point:</b>	No data
<b>Solubility:</b>	Product emulsifies in water.
<b>Specific gravity or density:</b>	1.07 ± 0.2 g/ml
<b>Flammability:</b>	Combustible liquid.
<b>Flashpoint:</b>	>104°

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## 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Product is considered stable for at least 2 years when stored at ambient temperatures out of direct sunlight, in the original container.
<b>Conditions to avoid:</b>	Avoid exposure to heat.
<b>Materials to avoid:</b>	Can react with oxidising agents and acid catalysts.
<b>Hazardous decomposition Products:</b>	If involved in a fire, it may emit fumes containing toxic compounds.
<b>Hazardous reactions :</b>	No special considerations.

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## 11. TOXICOLOGICAL INFORMATION

<b>Potential Health Effects:</b>	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 uncoordination.
<b>Acute:</b> <b>Acute toxicity - Oral :</b>	LD <sub>50</sub> >4000 mg/kg (rat). The product has low toxicity.
<b>Acute toxicity - Dermal :</b>	LD <sub>50</sub> >4000 mg/kg (rabbit). Slightly irritating to skin. The product has low dermal toxicity. It is non-sensitizing to the skin.
<b>Acute toxicity - Inhalation: LC<sub>50</sub></b>	6.31 mg/L (4 h) (rat). The product has low inhalation toxicity.
<b>Eye irritation:</b>	Slightly irritating
<b>Chronic toxicity:</b>	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.

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## 12. ECOLOGICAL INFORMATION

	No data is available on Affinity Force. Toxicity data is on the active ingredient, Carfentrazone-ethyl.
<b>Environmental Toxicity</b>	Carfentrazone-ethyl is toxic to algae (EC <sub>50</sub> = 15ppb), 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 on 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 200µg/bee). Do not contaminate sewers, drains, dams, creeks or any other waterways with product or the used container. with high sand content.
<b>Environmental Properties:</b>	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 show a low potential for accumulation. The low vapour pressure ( $1.19 \times 10^{-7}$  Torr) indicates that volatility is not a concern.

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### 13. DISPOSAL CONSIDERATIONS

#### Spills and Disposal:

material

or  
collected.

local

#### Disposal of empty containers:

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. Keep out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (ie organic solvent, detergent, bleach caustic) and add the solutions to the drums of wastes already Label for contents. Dispose of drummed wastes, including decontamination solution, in accordance with requirements of the Regional by-laws.

Triple rinse container and add residue to spray tank. Submit clean empty container for recycling through Agrecovery. If this is not possible, crush empty container and bury in landfill. If not available, bury containers below 500mm in a disposal pit marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt.

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### 14. TRANSPORT INFORMATION - International transport regulations

<b>UN number:</b>	This product is not classified as a Dangerous Good. 3082
<b>Class or Division:</b>	Class 9
<b>Classification Code:</b>	
<b>Packing Group:</b>	III
<b>Marine Pollutant:</b>	No
<b>Proper shipping name :</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
<b>INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):</b>	This material is not a dangerous good as defined by the International Air Transport Association Dangerous Goods Regulations.

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### 15. REGULATORY INFORMATION

<b>ACVM Registered Number:</b>	P7983
<b>HSNO Approval Code:</b>	HSR000436

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### 16. OTHER INFORMATION

<b>Additional information:</b>	<b>Original Issue Date:</b> 20 February 2009 <b>Revision Date:</b> N/A <b>Replaces:</b> N/A
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#### Disclaimer: Please Read

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