

**Section 1 - Identification of The Material and Supplier**

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**Chemical nature:** Active ingredient is a fluorinated triazole derivative.

**Trade Name:** **Turf Culture Smackdown Herbicide**

**APVMA Approval No:** 64135

**Product Use:** Agricultural herbicide for use as described on the product label.

**Creation Date:** **June, 2014**

**This version issued:** **September, 2014** and is valid for 5 years from this date.

**Section 2 - Hazards Identification**

**Statement of Hazardous Nature**

This product is classified as: Xn, Harmful. N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not a Dangerous Good according to the Australian Dangerous Goods (ADG) Code.

**Risk Phrases:** R52, R65, R66. Harmful to aquatic organisms. Harmful: May cause lung damage if swallowed. Repeated exposure may cause skin dryness or cracking.

**Safety Phrases:** S23, S36, S46, S24/25. Do not breathe vapours or spray mists. Wear suitable protective clothing. If swallowed, contact a doctor or Poisons Information Centre immediately and show this SDS or label. Avoid contact with skin and eyes.

**SUSMP Classification:** S5

**ADG Classification:** None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

**UN Number:** None allocated



**GHS Signal word: WARNING**

**HAZARD STATEMENT:**

- H227: Combustible liquid.
- AUH066: Repeated exposure may cause skin dryness or cracking.
- H304: May be fatal if swallowed and enters airways.
- H402: Harmful to aquatic life.

**PREVENTION**

- P102: Keep out of reach of children.
- P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
- P262: Do not get in eyes, on skin, or on clothing.
- P273: Avoid release to the environment.
- P280: Wear protective gloves, protective clothing and eye or face protection.

**RESPONSE**

- P331: Do NOT induce vomiting.
- P352: Wash with plenty of soap and water.
- P301+P310: IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
- P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog.

**STORAGE**

- P410: Protect from sunlight.
- P403+P235: Store in a well-ventilated place. Keep cool.

**DISPOSAL**

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

**SAFETY DATA SHEET**

## Emergency Overview

**Physical Description & Colour:** Yellow orange liquid.

**Odour:** Characteristic odour.

**Major Health Hazards:** if aspirated, may cause lung damage, repeated exposure may cause skin dryness or cracking.

## Potential Health Effects

**Inhalation:**

**Short Term Exposure:** Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

**Long Term Exposure:** No data for health effects associated with long term inhalation.

**Skin Contact:**

**Short Term Exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. However product may be irritating, but is unlikely to cause anything more than mild transient discomfort.

**Long Term Exposure:** Repeated exposure may cause skin dryness or cracking.

**Eye Contact:**

**Short Term Exposure:** This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

**Ingestion:**

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. Because of the low viscosity of this product, it may directly enter the lungs if swallowed, or if subsequently vomited. Once in the lungs, it is very difficult to remove and can cause severe injury or death. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

**Carcinogen Status:**

**SWA:** No significant ingredient is classified as carcinogenic by SWA.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

## Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Carfentrazone ethyl ester	128639-02-1	240g/L	not set	not set
Aromatic hydrocarbons	64742-94-5	736g/L	not set	not set
N-Methyl-2-pyrrolidone	872-50-4	20g/L	103	309
Other non hazardous ingredients	secret	to 100	not set	not set

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 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Inhalation:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Skin Contact:** Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed.

**Eye Contact:** No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

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## Section 5 - Fire Fighting Measures

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. Vapours from this product are heavier than air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures. They may also flash back considerable distances.

Fire decomposition products from this product are likely to be toxic and corrosive if inhaled. Take appropriate protective measures.

**Extinguishing Media:** In case of fire, use carbon dioxide, dry chemical, foam, water fog.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade.

**Flash point:** 88°C

**Upper Flammability Limit:** No data.

**Lower Flammability Limit:** No data.

**Autoignition temperature:** >450°C

**Flammability Class:** Flammable Category 4 (GHS), C1 combustible (AS 1940)

## Section 6 - Accidental Release Measures

**Accidental release:** 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. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. It should be fitted with a type A cartridge, suitable for organic vapours.

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. 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 SDS 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:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label.

## Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

<b>SWA Exposure Limits</b>	<b>TWA (mg/m<sup>3</sup>)</b>	<b>STEL (mg/m<sup>3</sup>)</b>
N-Methyl-2-pyrrolidone	103	309

The ADI for Carfentrazone ethyl ester is set at 0.03mg/kg/day. The corresponding NOEL is set at 3mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2013.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Eye protection such as protective glasses or goggles is recommended when this product is being used.

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**Skin Protection:** You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product. See below for suitable types.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: rubber.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

### Section 9 - Physical and Chemical Properties:

<b>Physical Description &amp; colour:</b>	Yellow orange liquid.
<b>Odour:</b>	Characteristic odour.
<b>Boiling Point:</b>	220-290°C at 100kPa (solvent)
<b>Freezing/Melting Point:</b>	No specific data. Liquid at normal temperatures.
<b>Volatiles:</b>	No specific data. Expected to be low at 100°C.
<b>Vapour Pressure:</b>	Negligible at normal ambient temperatures.
<b>Vapour Density:</b>	>1 (solvent)
<b>Specific Gravity:</b>	1.074
<b>Water Solubility:</b>	Emulsifiable.
<b>pH:</b>	No data.
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Coeff Oil/water Distribution:</b>	3.36 (log P octanol/water)
<b>Autoignition temp:</b>	>450°C

### Section 10 - Stability and Reactivity

**Reactivity:** No significant decomposition products. Hydrolyses at pH >7.

**Conditions to Avoid:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** strong oxidising agents.

**Fire Decomposition:** Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form hydrogen fluoride gas and other compounds of fluorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

### Section 11 - Toxicological Information

**Local Effects:**

**Target Organs:** There is no data to hand indicating any particular target organs.

N-methyl-2-pyrrolidone is a SWA Class 2 Reproductive risk.

### Classification of Hazardous Ingredients

Ingredient	Risk Phrases
No ingredient mentioned in the HSIS Database is present in this product at hazardous concentrations.	
<b>Carfentrazone Ethyl Ester:</b> LD <sub>50</sub> Oral, Rat >5000mg/kg	
LD <sub>50</sub> Dermal, Rabbit = >5000mg/kg	
LC <sub>50</sub> Inhalation, Rat = >5.72mg/L/4hr	
<b>SKIN:</b> Non-irritant. Not a skin sensitiser (guinea pig).	
<b>EYES:</b> Mild irritant (rabbit).	
In studies using laboratory animals Carfentrazone-ethyl did not cause reproductive, developmental nor carcinogenic effects.	
Negative in <i>in vitro</i> tests for genotoxicity.	
The ADI for Carfentrazone ethyl ester is set at 0.03mg/kg/day. The corresponding NOEL is set at 3mg/kg/day.	

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## Section 12 - Ecological Information

This product is toxic to aquatic organisms. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**Environmental fate, persistence and degradation:**

Carfentrazone-ethyl is rapidly degraded in soils under aerobic and anaerobic conditions. The half life in soil is 1-2 days. It is rapidly hydrolysed at pH 9 but stable at pH 5.

Field studies show that Carfentrazone-ethyl has low mobility in soil.

**Aquatic toxicity:**

Toxic to aquatic organisms. Bioconcentration factor in fish of 167.

Risk of bioaccumulation in an aquatic species is low.

Log Octanol/Water Partition Coefficient: 3.36

**Birds:** LD<sub>50</sub> bobwhite quail: >1000mg/kg

**Fish:** LC<sub>50</sub> fish: 1.6-43mg/L

**Bees:** LD<sub>50</sub> >100µg/bee (contact)

**Daphnia:** EC<sub>50</sub> 9.8mg/L

## Section 13 - Disposal Considerations

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

## Section 14 - Transport Information

**ADG Code:** This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

## Section 15 - Regulatory Information

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

The following ingredients: Aromatic hydrocarbons, N-Methyl-2-pyrrolidone, are mentioned in the SUSMP.

## Section 16 - Other Information

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

**Acronyms:**

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	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.

This SDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)

### SAFETY DATA SHEET