

# MATERIAL SAFETY DATA SHEET



Date of Issue: November 29, 2004

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product name** Correct<sup>®</sup> 100 EC Selective Herbicide  
**Other names** None  
**Product codes and pack sizes** 4952951 (10 L)  
**Chemical group** Aryloxyphenoxypropionate  
**Recommended use** Agricultural herbicide  
**Formulation** Emulsifiable concentrate  
**Supplier** Bayer CropScience Pty Ltd ABN 87 000 226 022  
**Address** 391 - 393 Tooronga Road, East Hawthorn, Victoria 3123, Australia  
**Telephone** (03) 9248 6888  
**Facsimile** (03) 9248 6800  
**Website** [www.bayercropscience.com.au](http://www.bayercropscience.com.au)  
**Contact** Development Manager (03) 9248 6888  
**Emergency Telephone Number** 1800 033 111 – Orica SH&E Shared Services

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**HAZARDOUS SUBSTANCE (see Risk phrases below) – NON DANGEROUS GOOD**  
**Combustible liquid. Dangerous to the aquatic environment.**

**Hazard classification** Hazardous (National Occupational Health and Safety Commission - NOHSC)

**Risk phrases** R36/38 – Irritating to eyes and skin  
R43 - May cause sensitisation by skin contact  
R65 – Harmful: May cause lung damage if swallowed  
R66 – Repeated exposure may cause skin dryness or cracking

**Safety phrases** See Sections 4, 5, 6, 7, 8, 10, 12, 13

**ADG classification** Not a “Dangerous good” for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. In Europe this product is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE.

**SUSDP classification** Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Propaquizafop	[111479-05-1]	100
Hydrocarbon solvent	[64742-94-5]	410
Naphthalene (in hydrocarbon solvent)	[91-20-3]	(< 58)
N-Methyl-2-pyrrolidone	[872-50-4]	100
Other ingredients, including surfactants	(non hazardous)	410

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## 4. FIRST AID MEASURES

**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to the doctor.**

<b>Inhalation</b>	If inhaled, remove to fresh air and keep at rest. Obtain medical advice if at all worried. If breathing stops or shows signs of failing, start artificial respiration. Call for prompt medical attention.
<b>Skin contact</b>	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
<b>Eye contact</b>	Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.
<b>Ingestion</b>	Wash out mouth with water. Do NOT induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice. DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.
<b>First Aid Facilities</b>	Provide eyewash and safety shower facilities in the workplace.
<b>Medical attention</b>	There is no specific antidote. Treat symptoms after decontamination. This product contains a hydrocarbon solvent, which will irritate nose and throat, may cause headaches, dizziness, drowsiness, could be anaesthetic, and may have other central nervous system effects. Care should be taken to prevent pulmonary aspiration. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

## 5. FIRE FIGHTING MEASURES

<b>Extinguishing media</b>	Water spray, foam, dry agent, carbon dioxide
<b>Hazards from combustion products</b>	Combustion products may include nitrogen oxides, carbon dioxide, carbon monoxide and hydrogen chloride
<b>Precautions for fire fighters</b>	Combustible liquid. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Toxic decomposition products may be produced in a fire. If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Avoid spraying directly into containers. Keep unnecessary people away. Bund area to prevent contamination of water sources. Dispose of fire control water and spillage safely later.
<b>Hazchem code</b>	Not applicable

## 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Extinguish or remove possible sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8 - PERSONAL PROTECTION. Keep people and animals away and upwind. Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

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## 7. HANDLING AND STORAGE

<b>Handling</b>	Keep out of reach of children. Will irritate the eyes and skin. Avoid contact with eyes and skin. Avoid inhaling vapour or spray mist. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing. Keep away from all ignition sources.
<b>Storage</b>	Store in the tightly closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Keep out of contact with fertilisers, insecticides, fungicides and seeds.
<b>Flammability</b>	Combustible liquid, Class C1 – flashpoint between 61° C and 150° C.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure standards</b>	The manufacturer of the solvent recommends an Occupational Exposure Limit for solvent naphtha (petroleum), heavy aromatic: TWA: 100 mg/m <sup>3</sup> (15 ppm). For the small amount of naphthalene present in the solvent the NOHSC Occupational Exposure Limits are: TWA: 10 ppm (52 mg/m <sup>3</sup> ), STEL: 15 ppm (79 mg/m <sup>3</sup> ). Skin notation.
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### Definitions

*Exposure standard – Time Weighted Average (TWA)* means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

*Exposure standard – Short term exposure limit (STEL)* means a 15 minute TWA exposure which should not be exceeded at any time during the working day.

*Skin notation* – Absorption through the skin may be a significant source of exposure.

<b>Biological limit values</b>	None allocated
<b>Engineering controls</b>	Control process conditions to avoid contact. Use local exhaust ventilation during manufacturing operations. Use in a well-ventilated area only.
<b>Personal Protective Equipment</b>	<ul style="list-style-type: none"><li>▪ Face-shield or goggles</li><li>▪ Cotton overalls buttoned to the neck and wrist and a washable hat</li><li>▪ Elbow-length butyl rubber gloves</li><li>▪ If inhalation exposure is likely to exceed the exposure levels above, an AS/NZS 1715/1716 approved respirator suitable for organic vapours should be worn.</li></ul>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Brownish liquid
<b>Odour:</b>	Aromatic
<b>pH:</b>	Not available
<b>Vapour pressure:</b>	0.006 kPa (hydrocarbon solvent) at 20° C 4.4 x 10 <sup>-7</sup> mPa (propaquizafop) at 25° C
<b>Vapour density:</b>	> 1.00 (air = 1) (hydrocarbon solvent)

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## 9. PHYSICAL AND CHEMICAL PROPERTIES - continued

<b>Boiling point range:</b>	220 to 290 ° C (hydrocarbon solvent)
<b>Freezing/melting point:</b>	Not available
<b>Solubility:</b>	Emulsifies in water
<b>Density:</b>	1.02 g/mL at 20° C
<b>Flash Point:</b>	Approximately 100° C
<b>Flammability (explosive) limits:</b>	Not available
<b>Auto-ignition temperature:</b>	> 450° C
<b>Partition coefficient (octanol/water):</b>	<i>Propaquizafop</i> : Log P <sub>ow</sub> = 4.78 at 25° C <i>N-methyl-2-pyrrolidone</i> : Log P <sub>ow</sub> = - 0.46

## 10. STABILITY AND REACTIVITY

<b>Chemical stability</b>	Stable under normal conditions of use.
<b>Conditions to avoid</b>	Avoid sources of ignition and extremes of temperature.
<b>Incompatible materials</b>	Incompatible with strong acids and bases, strong oxidizing and reducing agents.
<b>Hazardous decomposition products</b>	Nitrogen oxides, carbon dioxide, carbon monoxide, hydrogen chloride
<b>Hazardous reactions</b>	None known

## 11. TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

<b>Inhalation</b>	Harmful if inhaled. Will irritate nose and throat, may cause headaches, dizziness, drowsiness, could be anaesthetic, and may have other central nervous system effects.
<b>Skin contact</b>	Harmful in contact with skin. Will irritate the skin. Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	Will irritate the eyes.
<b>Ingestion</b>	Harmful if swallowed. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

## 11. TOXICOLOGICAL INFORMATION - continued

### ANIMAL TOXICITY DATA – SIMILAR PRODUCT

#### **Acute:**

<b>Oral toxicity</b>	LD <sub>50</sub> rat: approximately 2500 to 3500 mg/kg
<b>Dermal toxicity</b>	LD <sub>50</sub> rat: > 2000 mg/kg
<b>Inhalation toxicity</b>	Inhalation LC <sub>50</sub> rat: > 2.5 mg/L (4 h) ( <i>propaquizafop</i> )
<b>Skin irritation</b>	Slightly irritating (rabbit)
<b>Eye irritation</b>	Slightly irritating (rabbit)
<b>Sensitisation</b>	No information for the product. Propaquizafop is classified as a skin sensitiser.

#### **Chronic:**

Propaquizafop is not mutagenic, not teratogenic, did not show reproduction effects and it is not classified as a carcinogen.

This product contains naphthalene. The International Agency for Research on Cancer evaluated naphthalene and concluded that there was sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Accordingly, IARC classified naphthalene as a possible human carcinogen (Group 2B).

In animal studies N-methyl-2-pyrrolidone showed a developmental toxic effect in high doses which were maternally toxic.

## 12. ECOLOGICAL INFORMATION

Propaquizafop is very toxic to aquatic organisms. Low toxicity to birds and worms.  
DO NOT contaminate streams, rivers or waterways with Correct 100 EC or the used containers.

#### **Ecotoxicity**

##### Propaquizafop:

##### *Fish toxicity:*

LC<sub>50</sub> (96 h) rainbow trout 1.2 mg/L

LC<sub>50</sub> (96 h) bluegill sunfish 0.34 mg/L

LC<sub>50</sub> (96 h) carp 0.19 mg/L

##### *Bird toxicity:*

Acute oral LD<sub>50</sub> bobwhite quail > 2000 mg/kg; mallard duck > 2198 mg/kg

##### *Other:*

EC<sub>50</sub> (48 h) *Daphnia magna* > 2.1 mg/L

EC<sub>50</sub> (96 h) Algae (*Selenastrum capricornutum*) > 2.1 mg/L

##### *Bee toxicity:*

LD<sub>50</sub> (48 h) (oral) > 20 µg / bee; (contact) > 200 µg / bee

#### **Environmental fate, persistence and degradability, mobility**

*Propaquizafop* is moderately mobile in soil. It is not persistent in soil. The half-life in soil was found to be 15-26 days. In water the half life was approximately 20 days.

*N-methyl-2-pyrrolidone* is readily biodegradable.

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## 13. DISPOSAL CONSIDERATIONS

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. Empty containers or product should not be burnt. Dispose of waste material via a reputable waste disposal contractor.

## 14. TRANSPORT INFORMATION

<b>UN number</b>	Not applicable
<b>Proper shipping name</b>	Not applicable
<b>Class and Subsidiary Risk</b>	Not applicable
<b>Packing Group</b>	Not applicable
<b>EPG</b>	Not applicable
<b>Hazchem code</b>	Not applicable
<b>Marine Pollutant</b>	No – propaquizafop is not on the IMDG list as a Marine Pollutant. However, in Europe this product is classified as ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains propaquizafop), Class 9, UN 3082, Packing Group III, Marine Pollutant.

## 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988.  
Australian Pesticides and Veterinary Medicines Authority approval number: 45259  
See also Section 2.

## 16. OTHER INFORMATION

<b>Trademark information</b>	Correct® is a Registered Trademark of Bayer.
<b>Preparation information</b>	Replaces August 1, 2002 MSDS. Reasons for revision: 16 heading format, Product code, Risk Phrases, Combustible liquid, Density, Exposure Standards, Toxicological and Ecological information.

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.

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.

END OF MSDS