

MATERIAL SAFETY DATA SHEET



Date of Issue: May 21st, 2009

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name Precept® 300 EC Selective Herbicide

Other names None

Product codes and pack sizes Not available

Chemical group Phenoxy + pyrazolone + pyrazole crop safener

Recommended use Agricultural herbicide

Formulation Emulsifiable concentrate (EC)

Supplier Bayer CropScience Pty Ltd ABN 87 000 226 022

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Victoria 3123, Australia

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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 (road/rail)

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

Risk phrases R38 – Irritating to skin
R36 – Irritating to eyes
R43 – May cause sensitisation by skin contact
R63 – Possible risk of harm to the unborn child
R65 – Harmful: may cause lung damage if swallowed

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.

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

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
MCPA ethyl hexyl ester	[29450-45-1]	~ 400 (≡ 250 MCPA)
Pyrasulfotole	[365400-11-9]	50
Mefenpyr-diethyl	[135590-91-9]	12.5
Hydrocarbon solvent	[64742-94-5]	~ 45
Naphthalene (in hydrocarbon solvent)	[91-20-3]	(~ 4.5)
Other ingredients	(non hazardous)	~ 540

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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.

Inhalation	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.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if symptoms persist.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes and obtain urgent medical aid.
Ingestion	Wash out mouth with water. Do NOT induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice as above. DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.
First Aid Facilities	Provide eyewash and safety shower facilities in the workplace.
Medical attention	<u>Symptoms</u> <i>Local:</i> Eye and skin irritation. Skin dryness or cracking from repeated exposure. <i>Systemic:</i> Headache, vomiting, lethargy, muscular twitching, liver and kidney function disturbance, hypotension/hypertension. Ingestion of large amounts may cause central nervous system depression, stupor, coma and respiratory failure. May cause lung damage if swallowed. <u>Treatment</u> <i>Local:</i> treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as above under First Aid Measures. <i>Systemic:</i> Gastric lavage and administration of sodium sulphate in cases of significant ingestions. Forced alkaline diuresis and haemodialysis can be considered. There is no specific antidote and no contraindications. As this product contains a hydrocarbon liquid, 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

Extinguishing media	Foam, carbon dioxide, dry agent or water spray.
Hazards from combustion products	In a fire, irritant and toxic fumes containing carbon monoxide, hydrogen chloride, chlorine, hydrogen fluoride, nitrogen oxides, sulphur oxides and hydrogen cyanide may be released.
Precautions for fire fighters	The product is a Class C1 Combustible liquid. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later.
Hazchem code	Not applicable

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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. 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.

7. HANDLING AND STORAGE

Handling	Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. When opening the container and preparing the spray, wear cotton overalls, over normal clothing, buttoned to the neck and wrist, and elbow-length chemical resistant gloves. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use wash gloves and contaminated clothing.
Storage	Store in the closed, original container in a cool, dry, well-ventilated area. Do not store for prolonged periods in direct sunlight. Keep away from ignition sources.
Flammability	Combustible liquid, Class C1 - flashpoint greater than 60° C and less than 150° C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	There are no applicable NOHSC Exposure Standards. The manufacturer of the solvent recommends an Occupational Exposure Limit for solvent naphtha (petroleum), heavy aromatic: TWA: 100 mg/m ³ (15 ppm). For the small amount of naphthalene present in the solvent the NOHSC Occupational Exposure Limits are: TWA: 10 ppm (52 mg/m ³ , STEL: 15 ppm (79 mg/m ³)). <u>Definitions</u> <i>Exposure standard – Time Weighted Average (TWA)</i> means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week. <i>Exposure standard – Short term exposure limit (STEL)</i> means a 15 minute TWA exposure which should not be exceeded at any time during the working day.
Biological limit values	None allocated
Engineering controls	Control process conditions to avoid contact. Use in a well-ventilated area only.
Personal Protective Equipment	<ul style="list-style-type: none">Wear face shield or goggles to protect eyes.Wear cotton overalls buttoned to the neck and wrist and a washable hat.Wear elbow-length PVC or nitrile gloves.Wear a mask or respirator, AS/NZS 1715/1716 approved, suitable for organic vapours if inhalation is likely.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear amber to dark brown liquid
Odour:	Slight naphtha
pH:	3.0 to 5.0 (1% emulsion)
Vapour pressure:	0.03 kPa (at 38° C) – hydrocarbon solvent
Vapour density:	> 1.00 – solvent
Boiling point:	220 - 290° C (boiling point range of hydrocarbon solvent)
Freezing/melting point:	Not available
Solubility:	Emulsifiable in water
Density:	1.045 – 1.055 g/cm ³ at 20 °C
Flash Point:	102 °C
Flammability (explosive) limits:	LEL: 0.6; UEL: 7.0 Vol. % in air (hydrocarbon solvent)
Auto-ignition temperature:	> 450° C (hydrocarbon solvent)
Partition coefficient (octanol/water):	<i>MCPA</i> : Log P _{ow} = - 0.71 (pH 7, 25° C) <i>Pyrasulfotole</i> : Log P _{ow} = - 1.36 (pH 7, 23° C)

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Avoid sources of ignition and extreme heat.
Incompatible materials	Incompatible with strong oxidising agents, strong acids and bases, peroxides.
Hazardous decomposition products	In a fire, irritant and toxic fumes containing carbon monoxide, hydrogen chloride, chlorine, hydrogen fluoride, nitrogen oxides, sulphur oxides and hydrogen cyanide may be released.
Hazardous reactions	This product is mildly corrosive to steel.

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11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Note: The ester form of MCPA is generally less toxic and irritating to mammals than MCPA (acid form).

Inhalation	Harmful if inhaled. High vapour concentrations may be irritating to the respiratory tract, may cause headaches, dizziness, could be anaesthetic and may have other central nervous system effects.
Skin contact	Will irritate the skin. Repeated exposure may cause skin dryness or cracking.
Eye contact	Risk of serious damage to eyes.
Ingestion	Harmful if swallowed. Possible symptoms: headache, vomiting, dizziness. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

ANIMAL TOXICITY DATA - *PRODUCT*

Acute:

Oral toxicity	LD ₅₀ rat (female): > 5000 mg/kg
Dermal toxicity	LD ₅₀ rat: > 2000 mg/kg
Inhalation toxicity	LC ₅₀ rat (4 h): > 5465 mg/m ³ air
Skin irritation	Slightly irritating
Eye irritation	Moderately irritating
Sensitisation	Sensitising

Chronic:

MCPA (acid) is not mutagenic, carcinogenic, teratogenic or toxic for reproduction.

Pyrasulfotole is not mutagenic, and gave no indication of toxic effects in reproduction studies and was not teratogenic in animal studies. A possible carcinogenic effect is indicated at high doses in animal studies.

This product contains naphthalene. NOHSC has classified naphthalene as Category 3 carcinogen due to evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Frequent or prolonged contact with the hydrocarbon solvent in this product may defat and dry the skin, leading to discomfort and dermatitis.

12. ECOLOGICAL INFORMATION

Ecotoxicity

MCPA-2-ethylhexyl ester:

Fish toxicity: LC₅₀ (96 h) rainbow trout *Onchorhynchus mykiss* > 3.2 mg/L
Daphnia toxicity: EC₅₀ (48 h) for *Daphnia magna* 0.28 mg/L
Algal toxicity: EC₅₀ (120 h) for *Navicula pelliculosa* 1.2 mg/L
Bird toxicity: LD₅₀ bobwhite quail 2250 mg/kg

Pyrasulfotole:

Fish toxicity: LC₅₀ (96 h) for rainbow trout > 100 mg/L
 LC₅₀ (96 h) for bluegill sunfish > 100 mg/L
 LC₅₀ (96 h) for sheepshead minnow > 100 mg/L
Daphnia toxicity: EC₅₀ (48 h) for *Daphnia magna* > 100 mg/L
Algae toxicity: EC₅₀ (96 h) for algae 29.8 mg/L (*Pseudokirchneriella subcapitata*)
Bird toxicity: LD₅₀ bobwhite quail > 2000 mg/kg

Environmental fate, persistence and degradability, mobility

MCPA2-ethylhexyl ester is fairly mobile, but rapidly degraded in aerobic soils. It will biodegrade in water and has a low potential for bioaccumulation.
 Pyrasulfotole is relatively stable to hydrolysis and photolytic conditions. It is not readily biodegradable. Pyrasulfotole is primarily degraded by microbial processes under aerobic conditions. DT_{50S} established to date in field dissipation studies are 4-31 days. There is some movement of residues in the soil profile.

13. DISPOSAL CONSIDERATIONS

Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace caps and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. DO NOT burn empty containers or product. DO NOT re-use empty containers for any other purpose.

14. TRANSPORT INFORMATION

UN number	Not applicable
Proper shipping name	Not applicable
Class and Subsidiary Risk	Not applicable
Packing Group	Not applicable
EPG	Not applicable
Hazchem code	Not applicable
Marine Pollutant	No

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act, 1994.
 Australian Pesticides and Veterinary Medicines Authority approval number: 62652

See also Section 2.

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16. OTHER INFORMATION

Trademark information Precept® is a Registered Trademark of Bayer.

Preparation information New MSDS

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