

SAFETY DATA SHEET



eChem (Australia) Pty Ltd
Level 4, Lantos Place, 80 Stamford Road,
Indooroopilly, Qld, 4068
Phone: 1300 781 649
Fax: 1300 781 650

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Issued: January 2015

Emergency Contact:
1800 033 111

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: eChem Pendimethalin 330 Herbicide

Full Product Name: eChem Pendimethalin 330 Herbicide. Pendimethalin
Other Names: Pendimethalin. Group D Herbicide. Dinitroaniline herbicide.
Use: An agricultural Herbicide for control of certain weeds in crops.
Company: eChem (Australia) Pty Ltd.
Address: Level 4, Lantos Place, 80 Stamford Road, Indooroopilly, Qld, 4068.
ACN/ABN: 089 133 095.
Telephone Number: 1300 781 649 **Fax Number:** 1300 781 650
Emergency Contact: 1800 033 111

SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.
Combustible Liquid (C1).**

GHS classification of the substance/mixture

Hazardous to the Aquatic Environment – Long-Term Hazard: Category 1.
Sensitization – Skin: Category 1, 1A, 1B.
Hazardous to the Aquatic Environment – Acute Hazard: Category 1.
Aspiration Hazard: Category 1.
Flammable Liquids: Category 4.

Signal Word: DANGER.

Hazard statements:

H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H227 Combustible Liquid.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces: - No smoking.
P261 Avoid breathing mist, vapours or spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P321 Specific treatment (see Safety Directions on this label).
P331 Do NOT induce vomiting.

SECTION 2 HAZARDS IDENTIFICATION (Continued)

- P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.
 P370 + P378 In case of fire: Use carbon dioxide, dry chemical or foam for extinction.
 P391 Collect spillage.

Storage and Disposal:

- P403 + P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with national regulations.

Pictograms:**SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS****Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Pendimethalin	40487-42-1	330 g/L
Liquid hydrocarbon	64742-94-5	578 g/L
Other ingredients determined not to be hazardous		Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

- Ingestion:** If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 13 11 26). If swallowed, do not induce vomiting. Rinse any residual product from mouth and lips. Give water to drink and seek medical help.
- Eye contact:** Immediately hold eyes open and flood with clean water until chemical is removed. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. If irritation occurs and persists see a doctor.
- Skin contact:** Remove contaminated clothing and launder before re-use. Wash skin with soap and water. If irritation occurs and persists see a doctor.
- Inhalation:** Remove to fresh air and observe until recovered. Seek medical advice if effects persist.

Advice to Doctor: Treat symptomatically. If vomiting occurs, the solvent present in the formulation may cause pulmonary pneumonitis. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise symptomatic and supportive

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: Product is a combustible liquid. Flash point approximately 65°C. Eruption of containers is likely if confined at high temperatures. Intact containers exposed to excessive heat should be cooled with water to reduce drum pressure.

Extinguishing media: Use carbon dioxide, dry chemical or foam. If no alternative use water fog and contain all runoff. If containers are ruptured contain all runoff.

Hazards from combustion products: On burning will produce toxic and noxious vapours, including hydrogen chloride, hydrogen cyanide and oxides of carbon and nitrogen can be expected.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke or vapours generated. Evacuate personnel to a safe area.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or goggles. Large spills should be dyked. Absorb spilled material with absorbent material such as sand, clay or cat litter. Vacuum, shovel or pump spilled material into an approved container and dispose of waste as indicated in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Keep material out of streams and sewers.

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash 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.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

SECTION 7 HANDLING AND STORAGE

Precautions for safe Handling: No smoking, eating or drinking should be allowed where material is used or stored. Harmful if swallowed. Will irritate the eyes, throat, nose and skin. Avoid contact with eyes and skin. DO NOT inhale vapour. When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing. eChem Pendimethalin 330 Herbicide will stain (yellow) any objects it contacts. Keep all objects, etc. that are not to be stained well clear of the product and spray. If part open drum is to be stored, ensure that no water has been added to the drum.

Conditions for safe Storage: Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight. This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Do not store or use near naked flame, or heat sources. Do not cut or weld container. This product is a Schedule 5 Poison (S5) and must be stored, transported and sold in accordance with the relevant Health Department regulations. Not classified as a Dangerous Good by the Australian Code for the Transport of Dangerous Goods.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**National Exposure Standards:**

Exposure guidelines have not been established for this product by Safe Work Australia. However the following manufacturer's standard may apply:

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Aromatic hydrocarbons	100 ppm	Not set

TWA = Time-Weight Average

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean and that vapours and mists are minimised.

Personal Protective equipment (PPE):

General: When preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length nitrile gloves and face shield or goggles. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION (Continued)

Personal Hygiene: Harmful if swallowed. Will irritate the eyes, throat, nose and skin. Avoid contact with eyes and skin. DO NOT inhale vapour. 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.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear yellow-orange liquid.
Odour:	Solvent odour.
Boiling point:	No data available.
Freezing point:	No data available.
Specific Gravity:	Approximately 1.0.
Solubility in Water:	Emulsifies in water.
pH:	No data available.
Flammability:	Combustible liquid (C1).
Flashpoint (°C):	Approximately 65°C.
Poisons Schedule:	This product is a schedule 5 (S5) poison.
Formulation type:	Emulsifiable Concentrate.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight. Store away from sources of ignition. Avoid oxidizing agents. Avoid prolonged reaction with water as it can cause slow decomposition of the product and formation of acid, which may attack container.

Incompatible materials: Incompatible with strong oxidizing agents, may react violently.

Hazardous Decomposition Products: On burning will emit toxic fumes of carbon monoxide, carbon dioxide, hydrogen chloride, chlorine, fluorine and hydrogen fluoride etc.

Hazardous Reactions: Does not polymerise.

SECTION 11 TOXICOLOGICAL INFORMATION

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Potential Health Effects:**ACUTE EFFECTS**

Swallowed: Considered to have low acute toxicity. Acute Oral LD₅₀ (rat) > 5000 mg/kg (Pendimethalin).

Eye: This product may cause irritation to the eyes, but permanent damage is not anticipated.

Skin: This product may cause skin irritation. Will stain skin a yellow colour. Prolonged and repeated skin contact can cause defatting of the skin and result in dermatitis. Acute dermal LD₅₀ > 2,000 mg/kg (Pendimethalin).

Inhaled: High vapour concentrates of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, and may have other central nervous system effects. When applying the product as a spray avoid breathing in spray mist. LC₅₀ (rat) > 320 mg/L/4 hr for Pendimethalin.

Chronic Effects: Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects. Data indicates no reproductive, teratogenic or mutagenicity effects.

Carcinogenicity: A marked depression in body weight and a statistically significant increase in benign thyroid tumours (follicular adenomas) were observed at the highest dose level (5000 ppm) in a 24 month rat study, not considered to be relevant to humans.

SECTION 11 TOXICOLOGICAL INFORMATION (Continued)

Chronic exposure to Pendimethalin has resulted in increased liver weights in test animals. Fate in humans and animals: Pendimethalin is largely unabsorbed from the gastrointestinal tract, and excreted unchanged in the faeces. Pendimethalin, which does become absorbed into the bloodstream from the gastrointestinal tract, is rapidly metabolized in the kidneys and liver and is then excreted as metabolites via urine.

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: No data is available on this product. This product does degrade in the environment. It will not accumulate in the soil or water or cause long term problems. Low toxicity to birds. The LD₅₀ is 10388 mg/kg in mallards and 4187 mg/kg in Bobwhite quail. Highly toxicity to fish. Bluegill Sunfish 96-hour LC₅₀ is 0.2 mg/L and 0.42 mg/kg for channel catfish. Not toxic to honeybees. The honeybee LD₅₀ is > 100 µg/bee.

Environmental Fate: Pendimethalin is moderately persistent with a half life of approximately 40 days. Slight losses can occur from volatilisation and photodecomposition. Pendimethalin is strongly absorbed to most soils. Practically insoluble in water and so will not leach in most soils. Pendimethalin is stable to hydrolysis, but may be degraded by sunlight in aquatic systems. Pendimethalin may also be removed from the water column by binding to suspended sediment and organic matter. It is rapidly degraded under anaerobic conditions once precipitated to sediment.

SECTION 13 DISPOSAL CONSIDERATIONS**Spills and Disposal:****1) After intended use - containers:**

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 an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

2) After spill or accident

Persons involved in cleanup require adequate skin protection - see section 8. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities. In rural areas contact ChemClear <http://www.chemclear.com.au> for help with collection of unwanted rural chemicals.

SECTION 14 TRANSPORT INFORMATION

Transport: eChem Pendimethalin 330 Herbicide is not classified as Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail in containers less than 3000 litres as per ADG7, (See SP No. AU01). For bulk shipments as Class 9, use UN 3082, Hazchem code 2Z.

Marine and Air Transport: This product is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-

UN 3082; Class 9 (Miscellaneous Dangerous Goods); Packing Group III; Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains 33% Pendimethalin).

SECTION 15 REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a schedule 5 poison.

SECTION 15 REGULATORY INFORMATION (Continued)

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 70394.

This product is classified as a Hazardous Substance under the criteria of Safe Work Australia. Xi: Irritant.

This product is not classified as a Dangerous Good according to the ADG Code for packs less than 3000 litres (SP AU01) (7th Ed).

This product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 22 January 2015. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this SDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Ataxia: Inability to control the coordinate movements of the muscles.

Bradycardia: Is a resting heart rate of under 60 beats per minute (adults).

Carcinogen: An agent which is responsible for the formation of a cancer.

Combustible Liquid: Liquids that ignite with a flash point greater than 60°C.

Flammable Liquid: Liquids that ignite with a flash point less than 60°C.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Mutagenic: Able to produce a mutation (a change in the genetic material of cells).

Neurotoxicity: An adverse change in the structure or function of the nervous system.

Oedema: Accumulation of fluid in tissues.

PPE: Personal protective equipment.

Teratogen: An agent capable of causing abnormalities in a developing foetus, that is causing birth defects.

TWA: The Time Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life.

Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia HSIS website. (2015).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

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 should read this SDS 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.

End SDS.