



# MSDS

## Material Safety Data Sheet

Version 2.4

Date of Issue: 08:07:2024

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name: **AuStar® PLANT GROWTH REGULATOR**

Manufacturer: **Chemicals Direct Pty Ltd**

ACN: 80055623688

Address: 144 Northwood Street

West Leederville 6007

Western Australia

Telephone: +61 8 93884774

Facsimile: +61 8 93884700

**Emergency telephone number: 1 800 033 111 (ALL HOURS)**

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Recommended use: Plant growth regulator.

Appearance: Odourless, white suspension concentrate.

CHEMICAL ENTITY	CAS NO.	PROPORTION
Water	7732-18-5	HIGH
Paclobutrazol	76738-62-0	MEDIUM 23.2% (250 g/l)
Inert Solvents		LOW
Antifoam		VERY LOW

PROPORTION (% weight per weight): VERY HIGH >60, HIGH 30-60, MED 10-29, LOW 1-9, VERY LOW <1

### 3. HAZARDS IDENTIFICATION

Hazardous according to criteria of Worksafe Australia.

**Hazard Category:** Xi: Irritant.

R-phrases)

R36 Irritating to eyes.

S-phrases)

S2 Keep out of reach of children.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37 Wear suitable protective clothing and gloves.

S44 If you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible).

Poisons Schedule (Aust)/ Toxic Substance (NZ): S5

#### **4. FIRST AID MEASURES**

Poison Information Centres in each State capital city can provide additional assistance for scheduled poisons.

**Ingestion:** Rinse mouth with water. Give plenty of water to drink. If vomiting occurs give further water. Seek medical advice.

**Eye contact:** Eyelids to be held open. Immediately irrigate with copious quantities of water for at least 15 minutes. Seek medical advice.

**Skin contact:** Wash contaminated skin with plenty of soap and water. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.

**Inhalation:** Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effect persists.

**Notes to physician:** Treat symptomatically.

#### **5. FIRE-FIGHTING MEASURES**

**Specific hazards:** Non combustible material.

**Fire-fighting further advice:** Not combustible, however following evaporation of aqueous component residual material can burn if ignited. On burning will emit toxic fumes. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of combustion.

**Suitable extinguishing media:** Water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder),

#### **6. ACCIDENTAL RELEASE MEASURES**

**Small spills:** Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Use absorbent (soil, sand or other inert material). Collect and seal in properly labeled containers for disposal. Wash area down with detergent and excess water.

**Large spills:** Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapour. Contain using sand or soil - prevent run off into drains and waterways. Collect and seal in properly labeled drums for disposal. Wash area down with detergent and excess water. If

contamination of crops or waterways has occurred advise emergency services or State Department of Agriculture.

## **7. HANDLING AND STORAGE**

TWA - The Time-Weighted Average airborne concentrations over an eight-hour working day, for a five-day working week over an entire working life. These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to a low level as is workable. Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. If the directions for use on the product label are followed, exposure of individuals using the product will not exceed the above standard. The standard was created for workers who are routinely exposed during product manufacture.

Avoid skin and eye contact and inhalation of spray mist. A certified handler is not required. No tracking required. This product must not be applied onto or into water. Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Always read the label and any attached leaflet before use. When stored with substances of the same hazard classification the aggregate quantity must be considered.

## **8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Engineering measures:** Use in a well ventilated area. Keep containers closed when not in use.

**Personal protection equipment:** COVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES (S).

**Manufacture, Packaging and Transport:** Avoid skin and eye contact. Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking, or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

If inhalation risk exists, wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Preparation and use of product:** When mixing and using avoid contact with eyes and skin. After use and before eating, drinking, or smoking, wash hands, arms and face thoroughly with soap and water.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Form / Colour / Odour: Odourless, white suspension concentrate. Solubility: Dispersible in water.

Specific Gravity (20 C) : 1.07	Melting Point (C) : N App Boiling
Rel Vapour Density (air=1) : N Av	Point (C) : N Av Decomp. Point
Vapour Pressure (20 C) : N Av	(C) : N Av Sublimation Point : N
Flash Point (C) : N App	Av pH : N Av
Flammability Limits (%) : N App	Viscosity : N Av Evaporation Rate :
Autoignition Temp (C) : N App	N Av N Av (n-Butyl acetate=1)
% Volatile by weight : N Av	
Solubility in water (g/L) :	

(Typical values only - consult specification sheet)  
N Av = Not available N App = Not applicable

## 10. STABILITY AND REACTIVITY

Stability: Non-corrosive; stable under normal conditions of handling and storage.

## 11. TOXICOLOGICAL INFORMATION

**Main symptoms:** No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled are:

**Ingestion:** Swallowing can result in nausea, vomiting and abdominal pain. (1)

Eye contact: An eye irritant.

**Skin contact:** Contact with skin may result in irritation.

**Inhalation:** Where this material is used in a poorly ventilated area and at elevated temperatures and confined spaces vapour may cause irritation to mucous membranes and respiratory tract, headache and nausea. Inhalation of mists or aerosols may produce respiratory irritation.

**Long term effects:** Available evidence indicates that repeated or prolonged exposure to paclobutrazol may adversely affect the liver. (1)

Acute toxicity / Chronic toxicity

No LD50 data available for the product. However for the constituent,

PACLOBUTRAZOL: (1)

Oral LD50 (rat, male): 2000 mg/kg.

Oral LD50 (rat, female): 1300 mg/kg

Dermal LD50 (rat): >2000 mg/kg

Dermal LD50 (rabbit): >1000 mg/kg

Inhalation LC50 (rat, male): 4.79 mg/L/4hr

Inhalation LC50 (rat, female): 3.13 mg/L/4hr

Skin: Mild Irritant (rabbit). Not a skin sensitiser (guinea pig)

Eyes: Moderate irritant (rabbit)

Paclobutrazol was negative in a battery of mutagenicity assays.

Chronic studies in rats and dogs have shown liver effects (increased liver weights) in animals fed 12.5 and 75 mg/kg/day respectively.

Reproductive studies indicate that paclobutrazol produces embryo/foetotoxic effects at

maternally toxic doses, only.

ADI (Acceptable Daily Intake) for humans is 0.01 mg/kg/day. (2)

## **12. ECOLOGICAL INFORMATION**

Avoid contamination with waterways.

PACLOBUTRAZOL: (1)

### **AQUATIC TOXICITY**

Toxic to aquatic organisms.

96hr LC50 (rainbow trout): 27.8 mg/L

48hr LC50 (Daphnia magna): 33.2 mg/L

### **TERRESTRIAL TOXICITY**

Oral LD50 (mallard ducks): .7900 mg/kg

Non-toxic to bees (acute oral) at .0.002 mg/bee and (acute dermal) at .0.040 mg/bee.

A study in fish has shown that repeated doses produce no adverse effect on growth rate up to the concentration of 3.3 mg/L

LogPow = 3.2

Risk of bioaccumulation in an aquatic species is moderate.

### **ENVIRONMENTAL FATE, DISTRIBUTION AND PERSISTENCE**

The substance has moderate mobility in soil. Absorption depends on soil pH and organic matter content. It has potential for bioaccumulation, however, there is a rapid accumulation from fish (>95% within 3 days).

There is no evidence of photodegradation in water or on soil surfaces nor is there evidence of hydrolysis in water. The half life in soil is 6 months to a year.

## **13. DISPOSAL CONSIDERATIONS**

Clean out empty container by rinsing at least 3 times with water, add the washings to the spray tank. Destroy the empty containers by breaking, crushing or puncturing them. Bury empty containers at a depth of 500 mm or more at a disposal site, or take them to a dump that does not burn its refuse. Do not burn empty containers or product.

## **14. TRANSPORT INFORMATION**

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by sea, road or rail.

Not classified as Dangerous Goods by the criteria of the International Civil Aviation Organisation (ICAO) and the International Air Transport Association (IATA) for transport by air.

## **15. OTHER INFORMATION**

Literary reference

(1) Material Safety Data Sheet - Paclobutrazol tech. Paste (CDS 36319)

Orica Australia Pty Ltd. 01/98

(2) ADI List, Commonwealth Department of Health and Family Services. 04/97

## **16. OTHER INFORMATION**

Date of last revision of MSDS is 23rd February 2023

Emergency Contact point dial 000 - Fire or Police

24 hour Poisons Centre dial 1800 033 111 (ALL HOURS)