

MATERIAL SAFETY DATA SHEET

1. Identification of the substance/preparation and company/undertaking

Substance name: PIROUETTE

Use of substance: Horticultural plant growth regulator for professional use

Supplier: Fine Agrochemicals Ltd, Hill End House, Whittington ,
Worcester, WR5 2RQ, Tel: +44 01905 361800, Fax: +44 (0)
1905 361810

Email of competent person preparing MSDS: mariam@fine.eu

Emergency telephone number: Fine Agrochemicals Ltd, Tel: +44 01905 361800
(Office hours 9 am – 5 pm GMT)

2. Hazards identification

Classification under 67/548/EEC:

Hazard Symbol: N

Indication of Danger: Dangerous for the Environment.

Risk Phrases: Toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

Keep out of the reach of children.

Keep away from food, drink and animal foodstuffs.

When using, do not eat, drink or smoke.

Do not empty into drains

If swallowed, seek medical advice immediately and show this container or label

Use appropriate container to avoid environmental contamination.

This material and its container must be disposed of as hazardous waste.

Avoid release to the environment. Refer to special instructions/Safety data sheets



2. Hazards identification (Conti.):

Classification under EC 1272/2008:

Classification:

Hazardous to the aquatic environment

Chronic - Category 2

Based on the formulated product's toxicity to *Lemna*

($E_yC_{50} = 7.5$ mg product/L (0.03 mg a.s./L))

Pictogram



Signal word: Warning

Hazard Statement: H411: Toxic to aquatic life with long lasting effects

Precautionary Statement (Prevention): P273: Avoid release to the environment

Precautionary Statement (Response): F391: Collect spillage

Precautionary Statement (Storage): -

Precautionary Statement (Disposal): P501: Dispose of contents / container according to label specifications

3. Composition/Information On Ingredients:

Product: An aqueous suspension of paclobutrazol

Cas No: 76738-62-0 (active ingredient)

Einecs No: 266-325-7 (active ingredient)

Chemical Name	CAS-No./ EC-No.	Classification under 67/548/EEC:	Classification under EC 1272/2008:	Concentration (g/l)
Paclobutrazol	76738-62-0 266-325-7	Xn, N, R20/22, R50/53, Cat 3, R63	Acute tox 4; H302: H332, Aquatic acute 1; H400, Aquatic chronic 1; H410, Repr. 2; H361d	4



3. Composition/Information On Ingredients (Conti):

Chemical Name	CAS-No./ EC-No.	Classification under 67/548/EEC:	Classification under EC 1272/2008:	Concentration (g/l)
Dispersant	None	Xn, Xi, R22, R36, R38	Acute Tox. 4; H302, Eye Irrit.2; H319, Skin Irrit.2; H315	<20
Biocide	None	Xn, C, N, R22, R34, R43, R50	Acute Tox. 4; H302, Skin Corr. 1B; H314, Skin Sens. 1; H317, Aquatic. Acute 1; H400	<10

4. First aid measures

- After Ingestion: If swallowed, seek medical advice immediately, and show the container label, or this data sheet. Do not induce vomiting.
- After inhalation: Harmful, seek immediate medical attention. Remove the person to a well ventilated area and ensure they are warm and comfortable. Obtain immediate medical attention.
- After eye contact: Irrigate eyes with running water for at least 15 minutes. Obtain medical attention.
- After skin contact: Remove contaminated clothing. Wash the affected area thoroughly with soap and water. Obtain medical attention if irritation occurs.



5. Fire fighting measures

Flammability:	Non-flammable
Extinguishing Media:	For small fires use foam, carbon dioxide, halon or dry powder extinguishers. For large fires use foam or water-fog; avoid the use of water jets. Keep fire exposed containers cool by spraying with water.
Fire Fighting Equipment:	Wear full protective clothing and self-contained breathing apparatus.
Special exposure hazards:	Water used for extinguishing must be retained and not allowed to contaminate water courses.
Products of combustion and decomposition:	Carbon oxides and aldehydes. May evolve hazardous fumes

6. Accidental release measures

Personal Precautions

Wear protective clothing, see Section 8. Exposure control/personal protection

Environmental precautions

Prevent contaminated water entering drains. Spillages or uncontrolled discharges into water courses or sewers must be alerted to the appropriate authority.

Methods for cleaning up

Isolate spilled material for safe disposal, using suitable absorbent media, and collect in sealable polylined containers. Clean contaminated area with water and dispose of waste-water safely.



7. Handling and storage

Handling:	Keep away from drink and foodstuffs. Do not smoke in the workplace. Avoid contact with spray. Wash thoroughly after handling. Do not use on food crops.
Storage:	Store in cool dry conditions in original well marked containers.

8. Exposure controls/personal protection

Exposure controls

To avoid risks to man and the environment comply with instructions for use. Also see Section 15. Regulatory Information.

Occupational exposure controls

Respiratory Protection:	No respiratory protection should be needed. Work in well ventilated areas.
Hand protection:	Acid resistant gloves with a minimum 0.5mm thickness should be worn with sleeves worn over the top of the gloves.
Eye protection:	Glasses/goggles should be worn or face mask used.
Skin protection:	Wear sensible regularly laundered overalls. Showering and change into street clothes after work is recommended.

9. Physical and chemical properties:

General information

Appearance: Brown liquid

Odour: None

Important health, safety and environmental information

pH (1% solution): 6 - 7

Boiling point: No data

Flash point: Does not flash

Flammability: Non-flammable

Explosive properties: Non-explosive



9. Physical and chemical properties (Conti):

Oxidising properties:	Not oxidising
Vapour pressure:	1.9 x 10 ⁻⁶ Pa at 20°C (active ingredient)
Relative density(D ₄ ²⁰):	1.02
Solubility	
- water solubility @ 20°C:	Forms stable suspension
- solvent solubility:	Active ingredient is soluble in methanol and acetones
Partition coefficient:	No data
Viscosity:	66 mm ² /s @ 20°C
Evaporation rate:	No data

10. Stability and reactivity

Stable in original unopened containers for at least 2 years at ambient temperatures.

Conditions to avoid

- Excessive heat. Thermal decomposition will evolve toxic and irritant vapours.

Materials to avoid

- Incompatible with strong oxidising agents.

Hazardous decomposition products

- None under normal conditions of storage and use.

11. Toxicological informationAcute toxicity

Oral:	LD ₅₀ rat > 2,000 mg/kg
Inhalation:	LC ₅₀ rat > 2.55 mg/l
Skin:	LD ₅₀ rat >2,000 mg/kg

Irritation

Eye:	Non-irritant
Skin:	Non-irritant
Respiratory tract:	No data
Corrosivity:	Not corrosive
Sensitisation Skin:	Non-sensitising
Carcinogenicity:	Non-carcinogenic (Active ingredient)
Mutagenicity:	Non-mutagenic (Active ingredient)



11. Toxicological information (Conti.)

Reproductive tox:	No data
Chronic tox:	No data
Toxicity Class:	WHO (a.i.) U; EPA III

12. Ecological information

Ecotoxicity

Fish:	LC ₅₀ (96h) > 100 mg/l for oncorhynchus mykiss
Daphnia:	LC ₅₀ (48h) > 100 mg/l
Algae:	EC ₅₀ (72h)>100 mg/l
Higher Plants:	EC ₅₀ (7 d) 7.5 mg/l
Bird:	LC ₅₀ >2100 mg/kg diet for quail (active ingredient)
Bee:	LD ₅₀ >2.0 µg/bee (Oral), >40.0 µg/bee (Contact) (active ingredient)
Earthworms:	No data
Beneficial sps:	LR ₅₀ (48 hr) 48.114 L product/ha <i>Aphidius rhopalosiphi</i> LR ₅₀ (7 day) >126 L product/ha <i>Typhlodromus pyri</i>

Persistence and degradability: Half life is between 0.5-1.0 years in general, <42d in calcareous clay, <140 d in coarse, sandy loam.

13. Disposal considerations

Product

May be taken to waste disposal site or incineration plant when in compliance with local regulations refer to the local waste regulation authority (Environment Agency).

Packaging

Empty containers can be landfilled when in accordance with local regulation.



14. Transport information

UN number:	UN 3082
Class:	9
Proper shipping name:	Environmentally hazardous substance, liquid (Contains Paclobutrazol)
Packaging group:	III
Marine Pollutant:	Yes

15. Regulatory Information

Health, Safety and Environmental Information shown on the Product Label as required by regulation 9 of CHIP3:

Symbol(s):	N	Dangerous for the environment
Risk Phrases:	R51/53	Toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
Safety Phrases:	S2	Keep locked up and out of reach of children
	S13	Keep away from food, drink & animal feed stuffs
	S20/21	When using do not eat, drink or smoke
	S29	Do not empty into drains
	S46	If swallowed, seek medical advice immediately and show this container and label
	S57	Use appropriate container to avoid environmental contaminations
	S60	This material and its container must be disposed of as hazardous waste
	S61	Avoid release to the environment. Refer to special instructions/safety data sheets
Specific provisions:		Restricted to professional users

To avoid risks to man and the environment, comply with the directions for use.

A chemical safety report is not required since the product is already registered under the crop protection regulation 91/414/EC.



16. Other information:

For further information on the product and product use refer to the product label.

Text of R-phrases mentioned in Section 3

R20/22	Harmful by inhalation and if swallowed
R22	Harmful if swallowed
R34	Causes burns
R36	Irritating to eyes
R38	Irritating to skin
R43	May cause sensitisation by skin contact
R50	Very toxic to aquatic organisms
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R63	Possible risk of harm to the unborn child

This version replaces version 2.2 dated June 2009.

Reason for revision: This safety data sheet has been re-formatted and expanded to meet the revised requirements of the REACH directive and EC 453/2010 regulation.

