

MATERIAL SAFETY DATA SHEET

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

Substance name: PERLAN

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

May cause irritation to skin.

3. Composition/Information On Ingredients:

Product: A solution comprising:
Gibberellins A₄ & A₇ (GA₄ & GA₇) 19.0 g/l
6-benzylaminopurine (6-BA) 19.0 g/l

Substance	CAS No	EINECS No
GA ₄	468-44-0	n/a
GA ₇	510-75-8	n/a
6-BA	1214-39-7	214-927-5
Solubilising agent	77-92-9	n/a

Hazardous Ingredients:	Classification under 67/548/EEC:	Classification under EC 1272/2008:	Concentration:
6-BA	N, Xn, R22, R50	Acute tox 4 H302	19.0 g/l
Solubilising agent	Xi, R36	Warning Eye Irrit. 2- H319	<3.5 g/l



4. First aid measures

After ingestion:	Do not induce vomiting or give liquids. Seek medical advice.
After inhalation:	Remove the person to a well-ventilated area. Ensure the person is warm and comfortable. Obtain immediate medical attention.
After eye contact:	Irrigate eyes with running water for at least 15 minutes.
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. Auto ignition 415°C; flash point 106°C.
Extinguishing Media:	Use water mist, CO ₂ , foam or dry chemical.
Special exposure hazards:	May give rise to hazardous fumes in a fire. Protective clothing must be worn.
Products of combustion and decomposition:	At very high temperatures will decompose to form carbon and nitrogen compounds.

6. Accidental release measures

Personal Precautions

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

Environmental precautions

Prevent contaminated water entering drains.

Methods for cleaning up

In case of spillage use absorbent materials, e.g. sand or sawdust. Isolate spilled material for safe disposal and collect in sealable polylined containers, clean contaminated area with water. Ventilate area. Do not allow spillages to contaminate drains, soil or surface waters.



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.
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:	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 changing into street clothes after work is recommended.

9. Physical and chemical properties:

General information

Appearance:	Clear, colourless liquid
Odour:	Alcoholic
Important health, safety and environmental information	
pH (1% solution):	4.2
Boiling point:	187°C
Flash point:	106°C closed cup
Flammability:	
Explosive properties:	No explosive properties
Oxidising properties:	No data



9. Physical and chemical properties (cont'd):

Vapour pressure:	29.3 Pa @ 20°C (solvent) 5.5 X 10 ⁻⁶ Pa (6-BAP)
Relative density:	1.04
Solubility	
- water solubility @ 20°C:	Soluble
- fat solubility:	No data
Partition coefficient:	-0.92 log P _{ow} (solvent)
Viscosity:	66.5 cP
Vapour Density:	2.62 g/l
Evaporation rate:	No data
Auto ignition:	415°C

10. Stability and reactivity

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

Conditions to avoid

- Excessive heat.

Materials to avoid

- Incompatible with strong oxidising agents and acids.

Hazardous decomposition products

-None under normal conditions of storage and use.

11. Toxicological informationAcute toxicity

Oral:	LD ₅₀ rat: 3.4 g/kg
Inhalation:	LC ₅₀ (4h) rat > 5.28 mg/l
Skin and eye:	LD ₅₀ (4h) rat > 4 g/kg

Irritation

Eye:	Non-irritant
Skin:	Mild irritant



11. Toxicological information (cont'd):

Respiratory tract:	No data
Corrosivity:	Not corrosive
Sensitisation Skin:	Non-sensitising
Carcinogenicity:	Non-carcinogenic (Active ingredient)
Mutagenicity:	Non-mutagenic (Active ingredient)
Reproductive tox:	None (Active ingredient)
Chronic tox:	No data
Toxicity Class:	WHO (a.i.) U; EPA (formulation) III.

12. Ecological information

Ecotoxicity

Fish:	Non-toxic
Daphnia:	Non-toxic
Algae:	No data
Bird:	No data
Bee:	Non-toxic
General	This product is expected to be non-hazardous to the environment

Persistence and degradability: Degrades rapidly under biological conditions.

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:	Not classified
Class:	Not classified
Proper shipping name:	Not classified
Packaging group:	Not classified
Marine Pollutant:	Not classified

15. Regulatory Information

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

Symbol(s):	None
Risk Phrases:	None
Safety Phrases:	S1/2 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
	S25 Avoid contact with eyes
	S36 Wear suitable protective clothing
	S41 In case of fire and/or explosion do not breathe fumes
	S43 In case of fire use water, carbon dioxide or drying agent
	S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)
	S49 Keep in original container.

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.

This version replaces version 4.3 dated July 2010.

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.

Text of R phrases mentioned in Section 2:

- R22 Harmful if swallowed
- R36 Irritating to eyes
- R50 Very toxic to aquatic organisms

