

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CANUTEC 613-996-6666

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

Product name: Perlan®

Use of product: Horticultural plant growth regulator for professional use

Supplier: Fine Agrochemicals, Ltd., Hill End House, Whittington, Worcester
WR5 2RQ, United Kingdom. Tel: + 44-1905-361800

Distributed by: N.M. Bartlett Inc., 4509 Bartlett Rd, Beamsville, Ontario, L0R 1B1,
Canada. Tel: 905-563-8261

2. Composition/information on ingredients:

Product: A solution comprising:

Gibberellins A ₄ & A ₇ (GA ₄ & GA ₇)	19.0 g/l
6-benzylaminopurine	19.0 g/l

CAS No: GA4: 468-44-0
GA7: 510-75-8
6-BA: 1214-39-7

PCPA Reg. No: 29187

Hazardous ingredients : 6-benzylaminopurine Technical
- Caution Poison (LD₅₀Rat: male 2094 mg/kg, female 814 mg/kg)
- Warning Eye Irritant (Mild)

Exposure Limits : Not relevant

3. Hazards identification:

None

4. First aid measures:

After inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth to mouth if possible.

After skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

After eye contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

After swallowing: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

5. Fire fighting measures:

- Flashpoint (OECD A9) : 106°C
- Autoignition temperature : 415°C
- Conditions of Flammability : Non flammable
- Exposure Hazards : May give rise to hazardous fumes in a fire. Protective clothing must be worn.
- Extinguishing media : Use dry chemical, foam, CO₂, water mist.
- Fire Fighting Instructions : Evacuate area. Fight fire from safe distance. If possible isolate materials.
- Protection of Firefighters : Wear protective clothing to prevent contact with skin and eyes.
- Products of combustion and decomposition : Compounds of carbon and nitrogen.
- Explosion data
 - Sensitivity to impact : No data
 - Sensitivity to static discharge : No data

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 poly-lined containers. 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.
- Engineering Controls: Ensure that there is adequate ventilation in the area.
- 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.

9. Physical and chemical properties:

General information:

- Appearance and Physical State: Clear, colorless liquid
- Odour / Odour threshold: Slightly sweet odour

Important health, safety and environmental information:

- pH (1% solution): 4.2
- Boiling point: 187°C
- Melting point or freezing point: -60°C
- Oxidizing properties: No data
- Vapour pressure: 29.3 Pa @ 20°C (solvent)
5.5 X 10⁻⁶ Pa (6-BAP)
- Relative density (D₄²⁰): 1.04
- Solubility
 - water solubility @ 20°C: Soluble
 - fat solubility: No data
- Partition coefficient: -0.92 log P_{OW} (solvent)
- Viscosity: 0.0665 Pa.s
- Vapor density: 2.62 g/l
- Evaporation rate: No data

10. Stability and reactivity:

Stability :	Stable in original containers for at least 2 years at ambient temperatures.
Conditions to avoid:	Excessive heat
Materials to avoid:	Incompatible with strong oxidizing agents
Hazardous decomposition products:	None under normal conditions of storage and use.
Hazardous Polymerisation:	No data

11. Toxicological information:

Routes of entry: Eyes, skin, inhalation and ingestion.

Acute toxicity (For Perlan):

- Oral: LD₅₀ rat > 2000 mg/kg bw
- Inhalation: LC₅₀ (4 h) rat > 5.21 mg/l
- Dermal: LD₅₀ (4 h) rat: > 2000 mg/kg bw

Irritation (For Perlan):

- Eye: Non-irritant
- Skin: Non irritant
- Respiratory tract: No data
- Corrosivity: Not corrosive

Sensitization (For Perlan):

- Skin: Non-sensitizing
- Respiratory tract: Non-irritant

11. Toxicological information continued:

Chronic toxicity (For active Ingredients)

- Carcinogenicity: Not carcinogenic
- Mutagenicity: Not mutagenic
- Toxicologically Synergistic Materials : No data
- Reproductive toxicity: Not reprotox
- Teratogenicity/embryotoxicity : Not teratogenic

12. Ecological information:

Ecotoxicity (6-benzylaminopurine):

- Fish: LC₅₀ (96h) > 100 mg/l
- Daphnia: Non-toxic
- Algae: E_rC₅₀ (72h static) 45.1 mg/l
- Bird: LD₅₀ > 2000 mg/kg bobwhite quails
- Bee: LC₅₀ > 82 µg per bee

General:

6-Benzyladenine and GA4,7 are naturally occurring compounds and both have been identified as biochemical pesticides by the US EPA (EPA RED). The use rate of Perlan is very low and exposure from the proposed use is not expected to exceed natural levels already present within the environment from plant, bacterial and fungal sources.

Persistence and degradability: Degrades rapidly under biological conditions.

13. Disposal considerations:

Product disposal: For information on the disposal of unused, unwanted product, contact the manufacturer and the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

Packaging disposal: Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking to the collection site: Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Make the empty container unsuitable for further use. If there is no collection site in your area, dispose of the container in accordance with provincial requirements.

14. Transport information:

TDG (Canada) Status:	Not classified
UN number:	Not classified
NMFC number:	101685
Class:	065
Proper shipping name:	Plant growth inhibitor, modifier or regulator
Packaging group:	Not classified
Marine Pollutant:	Not classified
Other applicable information:	None

15. Regulatory information:

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 and 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

Canada

The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. Other information:

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

This version supersedes all previous versions. Prepared by Fine Americas, Inc. on the basis of the best available data. No representation is given that the information provided is complete in all respects.

