



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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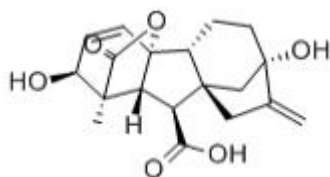
1. Chemical Product Identification

Common Name: Gibberellic acid 90% TC

Molecular Formula: $C_{19}H_{22}O_6$

Molecular Weight: 346.37

Structural Formula:



Chemical Name: (3S,3aS,4S,4aS,7S,9aR,9bR,12S)-7,12-dihydroxy-3-methyl-6-methylene-2-oxoperhydro-4a,7-methano-9b,3-propenoazuleno[1,2-b]furan-4-carboxylic acid

Form: Crystal powder

Color: White to yellowish

Odor: Odorless

CAS No.: 77-06-5

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Gibberellic acid	77-06-5	90
Other ingredients	---	10

3. Hazards Identification

Emergency Overview: WARNING! MAY BE FATAL IF SWALLOWED. Wash thoroughly



with soap and water after handling and before eating, drinking or using tobacco.

4. First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact: No known effect on skin contact, rinse with water for a few minutes.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Ingestion: Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

5. Fire-Fighting Measures

Flammable Properties: The material poses no explosion hazard in granular form.

Extinguishing Media: Water Spray, Foam, Dry Chemical, CO₂.

Fire Fighting Instructions: Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. Runoff from fire control may be a pollution hazard.

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

6. Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill: Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

7. Handling And Storage

Handling: Keep away from heat. Keep away from sources of ignition. Empty containers pose



a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Avoid contact with eyes in case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label.

Storage: Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

8. Exposure Controls/Personal Protection

Engineering Controls: Use only with adequate ventilation. When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Workers Protection Standard (WPS) for agricultural pesticides, the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment: Always follow the label instructions when handling this product. Applicators and other handlers must wear:

Long-sleeved shirt and long pants. Protective Gloves Shoes plus socks. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls over long sleeved shirt and long pants. Chemical Resistant Gloves Shoes Plus Socks. During aerial application, human flaggers must be in enclosed cabs.

9. Physical and Chemical Properties

Appearance: White to yellowish crystal powder

pH: 3.0-4.0

Loss on drying: $\leq 3.0\%$

Melting point: 223-225 °C

Boiling point: Decomposes before boiling

Partition Coefficient: $\log P = 0.72$ (at pH 7, 20°C)

Vapour pressure: 0.01 mPa (25°C)

Solubility: 4.28 g/l in water (20°C); In organic solvents: 0.01 g/l in n-hexane, 273 g/l in methanol, 3.1 g/l in ethyl acetate, 0.032 g/l in dichloromethane (all at 20°C).



10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and storage conditions.

Incompatibility Materials: Strong Oxidizers.

Polymerization: Polymerization will not occur.

11. Toxicological Information

Acute oral LD50 for rats: >5000 a.i. mg/kg

Acute dermal LD50 for rats: >2000 a.i. mg/kg

Acute inhalation LC50 for rats: >4.49 a.i. mg/l

Skin irritation: Non-irritating to rabbit skin

Eye irritation: Non-irritating to rabbit eyes

Skin sensitization: Not a sensitizer to Guinea Pig

12. Ecological And Ecotoxicological Information

Effect on birds: Acute oral LD50 for Bobwhite quail is >2250 a.i. mg/kg.

Effect on fish: Acute LC50 (96 h) for Rainbow trout is >120 a.i. mg/l.

Effects on aquatic invertebrates: Acute EC50 (48 h) for Daphnia magna is 76 a.i. mg/l.

Effects on algae: Acute 72 hour EC50 for Pseudokirchneriella subcapitata is 17.0 a.i. mg/l.

Effects on bees: contact acute 48 hour LD50 is >25 a.i. µg/bee.

Effects on earthworms: Acute 14 day LC50 is >1250 a.i. mg/kg.

13. Disposal Considerations

Waste Disposal: Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not contaminate water supply, food or feed by storage or disposal. Do not flush to surface water or sanitary sewer system. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. Transport Information



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Not applicable.

15. Regulatory Information

Not applicable.

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.