

SAFETY DATA SHEET



Bio-Tam[®] 2.0

Section 1. Identification

GHS product identifier: Bio-Tam 2.0

Recommended use of the chemical and restrictions on use

Identified uses: Biological mycofungicide

EPA Registration No.: 10163-399-101232

Supplier's details: SePRO Ag, LLC
11550 North Meridian Street
Suite 600
Carmel, IN 46032 U.S.A.
Tel: 317-580-8282
Toll free: 1-800-419-7779
Fax: 317-580-8290
Monday - Friday, 8am to 5pm [E.S.T.](#)

Emergency telephone number (with hours of operation) **INFOTRAC - 24-hour service 1-800-535-5053**

The following recommendations for exposure controls and personal protection are intended for the manufacture, formulation and packaging of this product. For applications and/or use, consult the product label. The label directions supersede the text of this Safety Data Sheet for application and/or use.

Section 2. Hazards identification

Adverse physicochemical, Human Health and Environmental Effects: No other hazards.

Signal Word: CAUTION

S Phrases: S13 – Keep away from food, drink and animal feeding stuffs.
S2 – Keep out of reach of children.
S20/21 – When using do not eat, drink or smoke.
S24/25 – Avoid contact with skin and eyes.



Contents: *Trichoderma asperellum* strain
Trichoderma gamsii strain

Additional advice: Do not contaminate water with the product or its container.

Other hazards: VPVB substances: none
PBT substances: none

Section 3. Composition/information on ingredients

Chemical nature: This product is a mixture.

Component	Concentration	Xi; R43
<i>Trichoderma asperellum</i> ICC012	1-3%	 3.4.2/1 Skin Sens. 1 H317
<i>Trichoderma gamsii</i> ICC080	1-3%	 3.4.2/1 Skin Sens. 1 H317

Section 4. First aid measures

Description of first aid measures

Skin contact: Wash with plenty of water and soap.

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

Ingestion: Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

Inhalation: Remove casualty to fresh air and keep warm and at rest.

Most important symptoms and effects, both acute and delayed: None

Indication of any immediate medical attention and special treatment needed: None

Section 5. Fire-fighting measures

Suitable extinguishing media: Water, Carbon dioxide (CO₂).

Unsuitable extinguishing media: No data available.

Special hazards arising from the substance or mixture: Do not inhale explosion and combustion gases. Burning produces heavy smoke.

Advice for firefighters: Use suitable breathing apparatus. Self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Move undamaged containers from immediate hazard area if it can be done safely.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear personal protection equipment. Remove persons to safety. See protective measures under Section 7 and 8.

Environmental precautions:

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. Retain contaminated washing water and dispose it. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Suitable material for taking up: absorbing material, organic, sand.

Methods and material for

containment and cleaning up: Wash with plenty of water

Reference to Other Sections:

See also section 8 and 13.

Section 7. Handling and storage

Precautions for safe handling: Avoid contact with skin and eyes, inhalation of vapors and mists. Don't use empty container before they have been cleaned. Before making transfer operations, assure that there aren't any incompatible material residuals in the containers. Contained clothing should be changed before entering eating areas. Do not eat or drink while working. See also section 8 for recommended protective equipment.

Conditions for safe storage: Store in a cool and dry place ($T < 25\text{ }^{\circ}\text{C}$). Avoid direct sunlight. Keep away from food, drink and feed. Incompatible materials: None in particular. Instructions as regards storage premises: Adequately ventilated premises.

Section 8. Exposure controls/personal protection

Exposure Controls

Eye/face protection: Use close fitting safety goggles, don't use eye lens.

Skin protection: No special precaution must be adopted for normal use.

Hand protection: Not need for normal use.

Respiratory protection: Not need for normal use.

Thermal Hazards: None.

Environmental Exposure Controls: None.

Section 9. Physical and chemical properties

Appearance/Odor
Odor Threshold
pH

Gray-greens solid with slight odor
No data available
4.38 (suspension in water)

Melting point/range	Not applicable
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate =1)	Not applicable
Flammability (solid, gas)	Not applicable
Lower explosion limit	Not available
Upper explosion limit	Not available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Water solubility	20 mg/ml
Partition coefficient: n-octanol/water	Not applicable
Lipid solubility:	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing
Miscibility:	Not a suspension
Fat Solubility	Not applicable.
Conductivity:	Not applicable.
Substance Groups	
Relevant Properties:	None

Section 10. Stability and reactivity

Reactivity:	Stable under normal conditions.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	None.
Conditions to avoid:	Stable under normal conditions. Avoid direct sunlight.
Incompatible materials:	None in particular.
Hazardous decomposition products:	None.

Section 11. Toxicological information

Toxicological information appears in this section when such data are available.

Data Referred to The Mixture:

Acute toxicity

Product	Result	Species	Dose	Expose
Bio-Tam 2.0	LD50 Oral	Rat	> 2000 mg/kg	-
	LD50 Dermal	Rat	> 2000 mg/kg	-
	LC50 inhalation	Rat	5.20 mg/l air	4 hours

Irritation/Corrosion

Skin: Not Irritating

Eyes: Not Irritating

Data referred to *Trichoderma asperellum* ICC012 and *Trichoderma gamsii* ICC080:

Irritation/Corrosion

Skin: Not available

Eyes: Not available

Respiratory or Skin Sensitization:

Skin: Sensitizing agent.

Carcinogenic Effects: Not expected to be carcinogenic.

Mutagenic Effects: *Trichoderma asperellum* ICC012 and *Trichoderma gamsii* ICC080 are not known to be mutagenic.

Teratogenic Effects: Not expected to be teratogenic.

Reproductive Toxicity: Not expected to be toxic.

Germ Cell mutagenicity: Not available.

STOT

Single Exposure: Not available.

Repeated Exposure: Not available.

Aspiration Hazard: Not available.

Section 12. Ecological information

Ecotoxicological information appears in this section when such data is available.

Toxicity Adopt good working practices, so that the product is not released into the environment.

Product	Result	Species	Exposure
Bio-Tam 2.0	EC 50 > 100 mg/l	Algae	48 hours
	EC 100 > 100 mg/l	Algae	48 hours

Persistence and Degradability

Persistence: Not expected to be persistent, due to *Trichoderma* data known in bibliography.

Degradability: Not known.

Bioaccumulative Potential

No data available.

Mobility in Soil:

Low mobility, due to *Trichoderma* data known in bibliography.

Results of PBT and vPvB assessment

vPvB: None.

PBT: None.

Other adverse effects: None.

Section 13. Disposal considerations

Waste treatment methods: Recover if possible. In so doing, comply with the local and national regulations currently in force.

Section 14. Transport information

DOT Not regulated for transport.

IATA/ICAO Not regulated for transport.

IMO-IMDG Not regulated for transport.

Section 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture Dir. 67/548/EEC (Classification, packaging and labelling of dangerous substances). Dir. 99/45/EEC (Classification, packaging and labelling of dangerous preparations). Dir. 98/24/EC (Risks related to chemical agents at work). Dir. 2000/39/EC (Occupational exposure limit values); Dir. 2006/8/CE. Regulation (CE) n. 1907/2006 (REACH), Regulation (CE) n. 1272/2008 (CLP), Regulation (CE) n. 790/2009 (1° ATP CLP), Regulation (EU) n. 453/2010 (Annex I).

Where applicable, refer to the following regulatory provisions:

Directive 82/501/EEC ('Activities linked to risks of serious accidents') and subsequent amendments.

Regulation (EC) nr 648/2004 (detergents).

1999/13/EC (VOC directive)

Chemical Safety Assessment:

Not applicable.

Section 16. Other information**Main bibliographic sources:**

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van

Nostrand Reinold CCNL - Appendix 1

History

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