

**SAFETY DATA SHEET****SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: **AMPLITUDE<sup>™</sup>**

USEPA REGISTRATION NO: 84059-28

MANUFACTURER: Marrone Bio Innovations

ADDRESS: 1540 Drew Avenue, Davis CA, 95618

EMERGENCY PHONE: **INFOTRAC Chemical Response System**

**US and Canada 1-800-535-5053 (24 hours)**  
**International 1-352-323-3500 (24 hours)**

OTHER CALLS: Marrone Bio Innovations 530-750-2800 (9am to 5 pm PST)

FAX PHONE: Marrone Bio Innovations 530-750-2808

PRODUCT USE: Bio-based Fungicide

**SECTION 2: HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:**

May be harmful if swallowed  
May be harmful in contact with skin  
Causes eye irritation.  
May be harmful if inhaled

**HAZARD SYMBOLS:**

Pictogram      No symbol

Signal Word      **Warning**

**HAZARD STATEMENT(S):**

H303      May be harmful if swallowed  
H313      May be harmful in contact with skin  
H320      Causes eye irritation.  
H333      May be harmful if inhaled

**PRECAUTIONARY STATEMENTS**

P264      Wash exposed areas thoroughly after handling  
P304 + 312      IF INHALED: Call a doctor if you feel unwell  
P305 + P351 + P338      IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing  
P312      Call a doctor if you feel unwell  
P337 + P313      If eye irritation persists: get medical attention.  
P501      Dispose of in accordance with all applicable local, regional, national, and international regulations.

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POTENTIAL ROUTES OF ENTRY: Oral, eye, and inhalation.

CARCINOGENICITY:

OSHA: Not listed      ACGIH: Not listed      NTP: Not listed.      IARC: Not listed

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

SYNONYM: MBI-110-AF5, MBI-110 EP AF5

ACTIVE INGREDIENT:

*Bacillus amyloliquifaciens* strain F727 in spent fermentation media, minimum  $1 \times 10^8$  CFU/mL

CAS NO.: None

% WT:  
96 %

EXPOSURE LIMITS: None Established

OTHER INGREDIENTS:

4 % inert, non-reactive

**SECTION 4: FIRST AID MEASURES**

**EYES:** Hold eye open and rinse slowly and gently with water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Do not use an eye ointment. Call poison control center or doctor for treatment advice.

**SKIN:** Remove contaminated clothing. Rinse skin immediately with plenty of water for at least 15-20 minutes. Call a poison control center or doctor for treatment advice.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or physician. Do not give anything by mouth to an unconscious person.

**INHALATION:** Remove person to fresh air. If the person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment.

**SECTION 5: FIRE-FIGHTING MEASURES**

**FLAMMABLE LIMITS IN AIR, (% BY VOLUME)**

UPPER: Not applicable.

LOWER: Not applicable.

**FLASH POINT:** Not applicable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

**NFPA HAZARD CLASSIFICATION**

HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION**

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HEALTH: 1

FLAMMABILITY: 0

REACTIVITY: 0

EXTINGUISHING MEDIA: Use extinguishing media appropriate for the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS DECOMPOSITION PRODUCTS: None

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

ACCIDENTAL RELEASE MEASURES: Wear suitable clothing such as eye protection, long-sleeved shirt, pants and shoes with socks. If spilled, contain - prevent run off into drains and waterways. Absorb liquid with an inert absorbent material. Seal absorbent material in a closed labeled container and dispose of in accordance with local ordinances.

**SECTION 7: HANDLING AND STORAGE**

HANDLING AND STORAGE: Store in the closed, original container in a well-ventilated area out of direct sunlight. Keep containers closed when not in use. Empty container completely and dispose of in accordance with all applicable federal, state and local environmental regulations.

OTHER PRECAUTIONS: No special precautions.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

ENGINEERING CONTROLS: Spill controls should be provided for working with large quantities.

VENTILATION: No TLV assigned. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and aerosols below the exposure levels. Ensure that eyewash stations and safety showers are proximal to the work-station location.

RESPIRATORY PROTECTION: Use a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95 or P-95.

EYE PROTECTION: Safety goggles or glasses with side shields advisable when handling this product.

SKIN PROTECTION: Wear gloves made of Latex or other impervious material.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: Clothing to prevent prolonged skin contact as needed such as long-sleeved shirt, long pants and shoes with socks.

WORK HYGIENIC PRACTICES: Wash any contamination from skin or eyes immediately. Wash hands and exposed skin before eating, drinking, smoking, after work, or using the toilet.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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|                               |                     |
|-------------------------------|---------------------|
| PHYSICAL STATE:               | Liquid              |
| COLOR:                        | Creamy tan to brown |
| ODOR:                         | Musty               |
| pH:                           | 6 to 7              |
| DENSITY:                      | 1 g/ mL             |
| SOLUBILITY IN WATER:          | Miscible in water   |
| BOILING POINT/RANGE:          | Not determined      |
| FREEZING/MELTING POINT:       | Not determined      |
| FLASH POINT:                  | Not determined      |
| EVAPORATION RATE:             | Not determined      |
| FLAMMABILITY (SOLID. GAS):    | Not determined      |
| UPPER FLAMMABILITY LIMITS:    | Not determined      |
| LOWER FLAMMABILITY LIMITS:    | Not determined      |
| VAPOR PRESSURE:               | Not determined      |
| VAPOR DENSITY:                | Not determined      |
| RELATIVE DENSITY:             | Not determined      |
| SOLUBILITY IN OTHER SOLVENTS: | Not determined      |
| PARTITION COEFFICIENT:        | Not determined      |
| AUTOIGNITION TEMPERATURE:     | Not determined      |
| DECOMPOSITION TEMPERATURE:    | Not determined      |
| KINEMATIC VISCOSITY:          | Not determined      |
| DYNAMIC VISCOSITY:            | Not determined      |
| EXPLOSIVE PROPERTIES:         | Not determined      |
| OXIDIZING PROPERTIES:         | Not determined      |

**SECTION 10: STABILITY AND REACTIVITY**

STABILITY: Stable.

INCOMPATIBILITY (MATERIAL TO AVOID): None known

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: None known

HAZARDOUS POLYMERIZATION: Not known to occur

CONDITIONS TO AVOID (POLYMERIZATION): None

**SECTION 11: TOXICOLOGICAL INFORMATION**

**WARNING:** This product is a biological pesticide.

|                                          |                                                                              |
|------------------------------------------|------------------------------------------------------------------------------|
| ACUTE ORAL TOXICITY LD <sub>50</sub> :   | >5000 mg/kg (rat). Category 5                                                |
| ACUTE DERMAL TOXICITY LD <sub>50</sub> : | >5050 mg/kg (rat). Category 5                                                |
| ACUTE INHALATION LC <sub>50</sub> :      | >5.19 mg/L (rat). Category 5                                                 |
| EYE IRRITATION:                          | Minimally irritating (rabbit). Category 2B                                   |
| SKIN IRRITATION:                         | Non-irritating (rabbit). Not categorized                                     |
| SKIN SENSITIZATION:                      | Not known.                                                                   |
| IV PATHOGENICITY:                        | Non-toxic; non-pathogenic (dose of 2.9 x 10 <sup>9</sup> CFU/rat) Category 4 |

**SAFETY DATA SHEET****SECTION 12: ECOLOGICAL INFORMATION**

No toxic effects demonstrated on adult honey bees when exposed orally to a limit dose of 1000 µg TGAI/bee after 16 days of post exposure observation (OPPTS 885.4380).

This product has currently not been evaluated for acute and long-term toxicity to avian life, freshwater aquatic life, and beneficial insects.

Prior to treating entire crop where the release of beneficial insects serve as part of an Integrated Pest Management (IPM) program, consult with an extension specialist, a pest control advisor (PCA) or with the product manufacturer.

**For terrestrial uses only:** Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

**Sensitive areas:** The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Do not allow residue from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, non-target crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals. As a precaution, do not allow product to drift to blooming crops or weeds if bees are foraging. Minimize spray drift away from the target area to reduce effects to other non-target insects

Bioconcentration potential: This material is not expected to bioconcentrate in organisms.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Do not reuse containers. Dispose of in accordance with all applicable federal, state, and local environmental regulations.

**SECTION 14: TRANSPORTATION INFORMATION**

U.S. DOT: Not regulated

IATA DGR: Not regulated

IMDG: Not regulated

Freight Classification: Fungicide. See NMFTA code.

**SECTION 15: REGULATORY INFORMATION****INTERNATIONAL REGULATIONS**

TSCA: Exempt

**U.S. FEDERAL REGULATIONS**

CERCLA: Not applicable.

**SARA TITLE III HAZARD CLASSIFICATION SECTIONS 311 AND 312:**

Immediate (acute) Health: None

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Delayed (chronic) Health: None  
Fire: None  
Sudden Release of Pressure: None  
Reactivity: None  
  
SARA 313: Not determined  
  
U.S. STATE REGULATIONS: None

US STATE RIGHT-TO-KNOW REGULATIONS: None

California Proposition 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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| <b>SECTION 16: OTHER INFORMATION</b> |
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SPECIAL HAZARDS: Not Determined

Date Issued: 12 December 2017  
Revision Date: 1  
Revision Note: Update USEPA registration number

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