

# MATERIAL SAFETY DATA SHEET

GRANDEVO® PTO

MSDS DATE: 002/19/2013

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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PRODUCT NAME: GRANDEVO® PTO

EPA REGISTRATION NO.: 84059-17

MANUFACTURER: Marrone Bio Innovations

ADDRESS: 2121 Second Street , Suite B-107 Davis CA, 95618

EMERGENCY PHONE: Info Trac Chemical Response System 800-535-5053 (24 hours)

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

FAX PHONE: 530-750-2808

PRODUCT USE: Natural Bioprotectant

REVISION DATE:

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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### ACTIVE INGREDIENT:

*Chromobacterium subtsugae* strain PRAA4-1<sup>T</sup>

### CAS NO.

None

### % WT

30.0

### EXPOSURE LIMITS

None Established

### OTHER INGREDIENTS:

70.0 % inert, non-reactive

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## SECTION 3: HAZARDS IDENTIFICATION

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EMERGENCY OVERVIEW: This product has very low toxicity by ingestion, skin contact, or inhalation.

POTENTIAL ROUTES OF ENTRY: Oral, eye and inhalation.

POTENTIAL HEALTH EFFECTS:

SKIN/EYE IRRITATION: May be irritating to skin and eyes for some individuals.

INHALATION: May be irritating to respiratory tract for some individuals.

EFFECTS OF OVEREXPOSURE: If product comes in contact with eyes or skin, irritation may occur.

CHRONIC HEALTH HAZARDS: None known.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Not determined

CARCINOGENICITY: OSHA: Not listed ACGIH: Not listed NTP: Not listed IARC: Not listed

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## SECTION 4: FIRST AID MEASURES

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**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:** Take off 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.

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## SECTION 5: FIRE-FIGHTING MEASURES

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

UPPER: Not applicable.

LOWER: Not applicable.

**FLASH POINT:** Not applicable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

**NFPA HAZARD CLASSIFICATION**

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

**HMIS HAZARD CLASSIFICATION**

HEALTH: 0

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

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**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.

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## SECTION 7: HANDLING AND STORAGE

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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.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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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.

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.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL STATE:	Powder
COLOR:	Dark brown
ODOR:	Fruity
pH:	7.95
DENSITY:	0.36 g/ml

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## SECTION 10: STABILITY AND REACTIVITY

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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.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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ACUTE ORAL TOXICITY LD<sub>50</sub>: >5000 mg/kg (rat)  
ACUTE DERMAL TOXICITY LD<sub>50</sub>: >5000 mg/kg (rabbit)  
ACUTE INHALATION LC<sub>50</sub>: >2.12 mg/L (rat)  
EYE IRRITATION: Minimally irritating (rabbit)  
SKIN IRRITATION: Slightly irritating (rabbit)  
SKIN SENSITIZATION: Non-sensitizing (guinea pigs)

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## SECTION 12: ECOLOGICAL INFORMATION

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This product is toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product if bees are visiting the treatment area. This product is toxic to aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Studies conducted on mammals, freshwater fish, birds, and non-target insects have been performed with the active ingredient without identifying any organisms at risk. This product is not expected to impose any environmental risk.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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

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## SECTION 14: TRANSPORTATION INFORMATION

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U.S. DOT: Not Regulated

IATA DGR: Not regulated

IMDG: Not Regulated

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## SECTION 15: REGULATORY INFORMATION

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### U.S. FEDERAL REGULATIONS

TSCA: Exempt  
CERCLA: Not applicable.

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

Immediate (acute) Health:	None
Delayed (chronic) Health:	None
Fire:	None
Sudden Release of Pressure:	None
Reactivity:	None

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## SECTION 15: REGULATORY INFORMATION, continued

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STATE REGULATIONS: None

INTERNATIONAL REGULATIONS: Not applicable

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## SECTION 16: OTHER INFORMATION

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DISCLAIMER: IN NO EVENT SHALL MARRONE BIO INNOVATIONS BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES. THE DATA PROVIDED IS FOR GENERAL INFORMATION ONLY AND IS NOT INTENDED AS A COMPREHENSIVE GUIDE CONCERNING HAZARDS THAT MAYBE ASSOCIATED WITH THIS PRODUCT. USER ASSUMES ALL RESPONSIBILITY FOR FOLLOWING PROPER SAFETY PROTOCOL AND CONSULTING TRAINED PERSONNEL FOR CONTROL AND CONTAINMENT.