

# Bacterial Dry Inoculant for Pea, Lentil and Vetch

## Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product name : Bacterial Pea, Lentil and Vetch Dry Inoculant

Trade name : Optimum Dry

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Natural fertilizer

Use advised against : None identified

#### 1.3. Details of the supplier of the safety data sheet

TerraMax, Inc  
3650 Dodd Road  
Eagan, MN. 55123  
Tel: 1-952-657-5592

#### 1.4. Emergency telephone number

Emergency number : 1-800-535-5053 (24 HOURS)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Comb. Dust

Carc. 1A H350

Full text of H statements : see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H232 - May form combustible dust concentrations in air  
H350 - May cause cancer

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P280 - Wear eye protection, Respiratory protection, protective gloves  
P308+P313 - If exposed or concerned: Get medical advice/attention  
P405 - Store locked up  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

#### 2.3. Other hazards

Prolonged or repeated contact to skin may cause mild irritation. Contact to eye may cause mild eye irritation.

#### 2.4. Unknown acute toxicity (GHS US)

Not applicable

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substance

Not applicable

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### 3.2. Mixture

Name	Product identifier	%
Humate	(CAS No) Proprietary	90 - 95
Quartz	(CAS No) 14808-60-7	< 6
Limestone	(CAS No) 1317-65-3	4 - 6
Rhizobium leguminosarum		.002% w/w
Axospirillum brasilense		.0018% w/w

Some constituent(s) and/or exact percentage(s) are being withheld as trade secrets.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Exposure to skin or mucous membranes may produce irritation, absorption of skin oils, smarting, redness, or contact dermatitis.
- Symptoms/injuries after eye contact : Exposure may cause reversible irritation and reddening of the eye.
- Symptoms/injuries after inhalation : Can cause respiratory tract irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : The product is not flammable.
- Explosion hazard : Avoid generation of dust; fine dust dispersed in air in sufficient concentration, and in the presence of an ignition source is a potential dust explosion hazards.

### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Collect as much as possible in clean container for (preferably) re-use or disposal. Spills of this product present a serious slipping hazard. Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: Exposure-controls/personal protection.
- Emergency procedures : Avoid contact with skin and eyes. Do not breathe dust. Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".

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Emergency procedures : Contain for reuse if possible. Sweep and scoop spilled material into clean, dedicated equipment. Collect all waste in suitable and labelled containers and dispose according to local legislation.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not allow large quantities, as are, to spread into the environment. Do not discharge into drains or rivers.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Recover mechanically the product. Wet clean or vacuum up solids. Sweep or shovel spills into appropriate container for disposal. Wash contaminated area with large amounts of water. Avoid raising powdered materials into airborne dust. Avoid dispersal of dust in the air (i.e., cleaning dust surfaces with compressed air). Non-sparking tools should be used.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid raising powdered materials into airborne dust. Avoid contact with skin and eyes. Do not breathe dust. Keep container closed when not in use. Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixture operations. Provide adequate precautions, such as electrical grounding and bonding or inert atmospheres.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation to minimize dust concentrations.

Storage conditions : Keep only in the original container in a cool, well-ventilated place. Keep containers closed when not in use.

Incompatible materials : Strong acids.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Quartz (14808-60-7)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.025 mg/m <sup>3</sup> (respirable fraction)
OSHA	Remark (OSHA)	(3) See Table Z-3.

  

Limestone (1317-65-3)		
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable dust)

### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust dusts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area. Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment : Protective goggles. Gloves. Dust mask.



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Hand protection	: Wear protective gloves.
Eye protection	: Chemical goggles or safety glasses. It is strongly recommended contact lenses not be worn when working with chemicals because they may increase the severity of an eye injury.
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment.
Other information	: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

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#### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder
Color	: Gray- black
Odor	: Odorless
Odor threshold	: No data available
pH	: 6.0 – 7.0 (slurry)
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Insoluble in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: Not applicable (No oxidizing agent)
Explosion limits	: No data available

#### 9.2. Other information

Volatiles	: None
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### SECTION 10: Stability and reactivity

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#### 10.1. Reactivity

Stable and non-reactive under normal operating conditions.

#### 10.2. Chemical stability

Stable under normal operating conditions.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

#### 10.4. Conditions to avoid

Avoid low temperatures below freezing point.

#### 10.5. Incompatible materials

Strong acids.

#### 10.6. Hazardous decomposition products

Thermal decomposition: Carbon monoxide. Carbon dioxide. Alkali oxides.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: May cause cancer.

<b>Quartz (14808-60-7)</b>	
IARC group	1 - Carcinogenic to humans
National Toxicology Program (NTP) Status	2 - Known Human Carcinogens

Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

Not established.

#### 12.3. Bioaccumulative potential

Not established.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT

Not regulated for transport

#### Additional information

Other information : No supplementary information available.

#### ADR

No additional information available

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### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

### 15.2. International regulations

#### CANADA

<b>Humate</b>	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
<b>Quartz (14808-60-7)</b>	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
<b>Limestone (1317-65-3)</b>	
Listed on the Canadian NDSL (Non-Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

#### EU-Regulations

<b>Humate</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Quartz (14808-60-7)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	
<b>Limestone (1317-65-3)</b>	
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)	

#### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

#### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

#### 15.2.2. National regulations

<b>Humate</b>	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)	
Listed on the Korean ECL (Existing Chemicals List)	
<b>Quartz (14808-60-7)</b>	
Listed on IARC (International Agency for Research on Cancer)	
Listed on the AICS (Australian Inventory of Chemical Substances)	
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)	
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory	
Listed on the Korean ECL (Existing Chemicals List)	
Listed on NZIoC (New Zealand Inventory of Chemicals)	
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)	
Listed as carcinogen on NTP (National Toxicology Program)	
Listed on the Canadian IDL (Ingredient Disclosure List)	
Listed on INSQ (Mexican national Inventory of Chemical Substances)	
Listed on CICR (Turkish Inventory and Control of Chemicals)	

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### Limestone (1317-65-3)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Listed on INSQ (Mexican national Inventory of Chemical Substances)  
Listed on CICR (Turkish Inventory and Control of Chemicals)

### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer and/or reproductive toxicity

### Quartz (14808-60-7)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
Yes	No	No	No	

## SECTION 16: Other information

Other information : Refer to NFPA 654, *Standard for the Prevention of Fire and Dust explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids*, for safe handling.

Carc. 1A	Carcinogenicity, Category 1A
Comb. Dust	Combustible dust
H232	May form combustible dust concentrations in air
H350	May cause cancer

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*