

# Material Safety Data Sheet

## Section 1. Product and Company Identification

**Product Name:** VAULT® FOR PEANUT (Co-pack – Inoculant, Integral®)  
**Product Code:** SJ/LQVLT/PN  
**Effective Date:** January 22, 2009

**Manufacturer Information:** Becker Underwood, Inc.  
 801 Dayton Avenue  
 Ames, Iowa 50010  
 Information Phone: (515) 232-5907  
 Emergency Phone: Chemtrec (800) 424-9300 or 703 527 3887 (international)

### Hazardous Material Information System:

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	X

## Section 2. Ingredients and Hazards Identification

**Emergency Overview:** May cause respiratory tract, eye, and skin irritation.

### Potential Acute Health Effects:

- Eyes:* Short term harmful effects are not expected. However, prolonged or repeated contact may result in mechanical irritation.
- Skin:* Short term harmful effects are not expected. However, prolonged or repeated contact may result in mechanical irritation.
- Inhalation:* Short term harmful effects are not expected. However, exposure to vapors or mist may cause coughing or wheezing when inhaled.
- Ingestion:* Not an intended route of exposure. Short term harmful effects are not expected. However, Ingestion of large quantities may be harmful.

## Section 3. Composition/Information on Ingredients

The composition of this material is a trade secret. Contains no other components or impurities which will influence the classification with regard to human and environmental risk assessment.

## Section 4. First Aid Measures

**Eye Contact:** Immediately flush eyes with water for at least 15 minutes.  
**Skin Contact:** Wash with soap and water. If irritation develops seek medical attention. Remove and launder clothing before reuse.  
**Inhalation:** Move to fresh air. Seek medical attention if irritation develops.  
**Ingestion:** Seek medical attention.

## Section 5. Fire Fighting Measures

**Flammability of Product:** Not a fire or explosion hazard.  
**Fire Fighting Media:** Foam, alcohol foam, CO2, dry chemical, water fog.  
**Protective Clothing:** This product is an aqueous mixture which will not burn. No special procedures required besides standard fire fighting procedures.

## Section 6. Accidental Release Measures

- Clean-Up Procedures:** Collect spilled material with an inert absorbent such as sand or vermiculite. Place in properly labeled and closed container. Dispose of collected material according to federal, state/provincial and local environmental regulations.
- Spills and Leaks:** Contain the spill or leak to prevent discharges to surface streams or storm sewers.

## Section 7. Handling and Storage

- Handling:** Avoid breathing mist. General mechanical ventilation can be expected to effectively remove and prevent build up of any vapor or mist generated from handling this product in a closed environment. Protect eyes to prevent contact. Avoid prolonged or repeated exposure to skin.
- Storage:** Store between 0° to 40°C. Temperatures above 50° C are lethal to Rhizobia bacteria. Do not freeze. Keep container in a dry place. Keep containers sealed until ready for use. Store away from food or feed.

## Section 8. Exposure Control/Personal Protection

Hazardous Components		Occupational Exposure Limits		
Component	CAS Number	OSHA PEL	ACGIH TLV	Weight Percent
<i>Bacillus subtilis</i> , MBI600 a naturally occurring species (Integral)	Proprietary	N/A	N/A	> 1%
* <i>Bradyrhizobium</i> sp. (Inoculant)	Proprietary	N/A	N/A	100%
*Rhizobia is a soil bacteria that is not pathogenic to plants or humans.				
***No reportable quantities of toxic chemical(s) subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372 are present***				

- Engineering controls:** General mechanical ventilation can be expected to effectively remove and prevent build up of any vapor or mist generated from handling this product in a closed environment.
- Personal Protection:**
- Eyes:* Wear safety glasses . Wear additional eye protection such as chemical goggles or face shield if splashing or spraying hazard exists. Have an eye wash station available.
  - Body:* To prevent skin contact wear coveralls, apron, boots, or lab coat.
  - Hands:* Avoid skin contact by using chemically resistant gloves.
  - Respiratory:* No respiratory protection required under normal conditions of use. Use local exhaust to control excessive vapors/mists. If excessive vapors or mists are persist use appropriate NIOSH/MSHA approved organic vapor/mist respirator.
- Other:** Open wounds or skin surface disruptions should be covered with a chemical resistant patch to minimize absorption risks. Clean clothing should be worn daily to avoid possible long-term build up of the product leading to chronic overexposure.

## Section 9. Physical and Chemical Properties

<b>Odor Inoculant</b> <b>Odor Integral</b>	Slight odor Musty odor	<b>Vapor Density All</b>	Heavier than air
<b>Color Inoculant</b> <b>Color Integral</b>	Straw colored Beige or off-white	<b>Evaporation Rate All</b>	Slower than ether
<b>Physical state Inoculant</b> <b>Physical state Color Integral</b>	Liquid Liquid	<b>Specific Gravity Inoculant</b> <b>Specific Gravity Integral</b> (H <sub>2</sub> O = 1)	1.00 g/mL 1.16 g/mL
<b>pH</b>	NA	<b>Solubility All</b>	Water soluble
<b>Melting/Freezing Point</b>	NA		

## Section 10. Stability and Reactivity

**Chemical Stability:** This material is chemically stable under normal storage and handling conditions.

**Hazardous Decomposition:** When involved in a fire, burning may evolve noxious fumes which may include carbon monoxide, carbon dioxide, nitrous oxides, acetic acid, or other toxic compounds depending on the chemical composition and combustion conditions. However, all of the water must be driven off first for this to occur.

**Hazardous Polymerization:** Is not known to occur.

**Incompatibility (Materials to Avoid):** Long term storage in direct contact with reactive metals such as aluminum, zinc, copper, nickel, magnesium, etc. Other materials to avoid include strong oxidizing agents, disinfectants, biocides. Avoid extremes in temperature. Microorganisms denature at >50°C

## Section 11. Toxicological Information

**Chronic Toxicity:** None known

**Mutagenic Effects:** None known

**Teratogenic Effects:** None known

**Developmental Toxicity:** None known

**Acute Effects on Humans:** May cause skin, eye, and respiratory irritation.

**Sensitization:** Repeated or prolonged exposure to the substance at concentration above the exposure limits may cause respiratory tract and lung sensitization.

**Carcinogenic Effects:** This material is not known to cause cancer in animals or humans.

**Existing Medical Conditions Aggravated By Exposure:** May provoke asthmatic response in persons with asthma who are sensitive to airway irritants.

## Section 12. Ecological Information

**Ecotoxicity:** No data available, however the material is not expected to have any deleterious toxic effect.

**Environmental Fate:** No data available regarding the environmental fate or biodegradation.

## Section 13. Disposal Considerations

**EPA Waste Number:** Non-hazardous waste

**Treatment:** Dispose of according to all federal, state/provincial and local environmental regulations.

## Section 14. Transport Information

**D.O.T. Classification:** Not regulated

**IMO/IMDG** Not regulated

**Classification:**

**IATA Classification:** Not regulated

## Section 15. Regulatory Information

### US Federal Regulations:

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution – chemical inventory – hazard identification: No products were found.

**SARA 313:** No reportable quantities of toxic chemical(s) subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372 are present.

## Section 16. Other Information

The information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of Becker Underwood's knowledge. Because use conditions and applicable laws may differ from one location to another and may change with time, Recipient is responsible for determining whether the information is appropriate for recipient's use. Since Becker Underwood has no control over how this information may be ultimately used, all liability is expressly disclaimed and Becker Underwood assumes no liability.

VAULT® and Integral® is a Registered Trademark of Becker Underwood.