



## SAFETY DATA SHEET

### 1. IDENTIFICATION

<b>Product Name:</b>	Half BAC™
<b>Intended Use/Restrictions of use:</b>	Rhizosphere inoculant with a unique combination of functional groups involved in optimal rhizosphere resilience and nutrient utilization
<b>Details of Supplier of SDS:</b>	<p>Wilchem (Pty) Ltd            39 Jonal Drive            Cavan, SA 5094            E-mail: adminsa@wilchem.com.au            Emergency telephone: (08) 8359 6855</p>

### 2. HAZARDS IDENTIFICATION

<b>Classification of the Substance</b>	CLP / GHS / Hazcom 2012 Classification: Not classified as hazardous
<b>Skin Contact:</b>	Non-irritant
<b>Eye Contact:</b>	Non-irritant
<b>Inhalation:</b>	Not an inhalation hazard under normal conditions of use.
<b>Ingestion:</b>	Low toxicity product. It is highly unlikely that a sufficient quantity would be accidentally swallowed to cause any injury.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS#	EC#	Classification GHS
<i>Bacillus amyloliquefaciens</i>	Not assigned	Not assigned	Not classified as hazardous
<i>Bacillus licheniformis</i>	Not assigned	Not assigned	Not classified as hazardous
<i>Bacillus megaterium</i>	Not assigned	Not assigned	Not classified as hazardous
<i>Bacillus subtilis</i>	Not assigned	Not assigned	Not classified as hazardous
<i>Brevibacillus laterosporus</i>	Not assigned	Not assigned	Not classified as hazardous

Bacillus Spp. In pH buffered solution. Not classified as hazardous.

### 4. FIRST AID MEASURES

<b>Skin Contact:</b>	Wash exposed skin with soap and water.
<b>Eye Contact:</b>	Flush thoroughly with water for 15 minutes. If any irritation persists, seek medical attention.
<b>Inhalation:</b>	Not an inhalation hazard under normal conditions of use.
<b>Ingestion:</b>	Drink water do not induce vomiting. Seek medical attention.



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Advice to Physician: Symptomatic treatment

### 5. FIRE-FIGHTING MEASURES

**Type of Material:** Non-combustible liquid.

**Extinguishing Media:** This product is not flammable or combustible. If caught in a fire, use media appropriate for surrounding fire.

**Special Exposure Hazards:** This product does not burn freely. Responders should take into consideration the hazardous risk associated with responding to a fire in the area where the material may be stored or handled

**Special Protective Equipment:** Normal firefighting bunker gear.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Use protective clothing, gloves, safety goggles and boots. Do not swallow.

**Environmental Precautions:** Avoid disposal of large amounts into drains, surface water or groundwater.

**Disposal Method(s):** Carefully clean up spilled material and wash exposed area with soap and water. Dispose material into suitable container, within local regulations.

### 7. HANDLING AND STORAGE

**Handling Precautions:** Follow Biosafety Level 1 procedures.  
Do not eat or drink while handling the product.  
Wash exposed skin with soap and water after handling this product.

**Storage Conditions:** Store in accordance with package instructions.  
Do not freeze.  
Store in a cool, dry and dark place.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Control Parameters:** Standard precautionary measures for handling chemicals should be observed.

**Exposure Controls:**

Eye / face protection	Use safety goggles.
Skin protection	Use protective clothing & gloves.
Respiratory protection	No specific recommendation.
Thermal hazards	None.



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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### General Information:

Appearance:	Liquid
Colour:	Slightly yellow cloudy colour
Smell:	No significant odour
Formulation Type:	Liquid (LQ)

**Storage Stability:** Store at room temperature. Minimize temperature fluctuations

**Shelf Life:** 6 months at room temperature.

**Bulk Density:** 1000 kg/m<sup>3</sup>

**Flammability:** Non-flammable

**Flash Point:** Not applicable

**pH:** pH 7

**pH of 1% Aqueous Dilution:** pH 7

**Oxidizing Properties:** Non-oxidizing

**Corrosiveness:** Non-corrosive

**Water Content:** 97%

**Solubility in Water:** 100%

**Foaming:** Not applicable

**Particle size:** Not applicable

**Volatility:** Non-volatile

**Viscosity:** Not applicable

### 10. STABILITY AND REACTIVITY

**Stability:** Stable

**Conditions to Avoid:** Avoid very low pH (<3) and very high pH (>9)

**Materials to Avoid:** Bactericides, antibiotics, sterilants and \*non-compatible agrochemicals.

**Hazardous Decomposition Products:** None known

### 11. TOXICOLOGICAL INFORMATION

**Acute Oral Toxicity:** None known,

**Eye Irritation:** Non-toxic natural bacteria

**Skin Irritation:**

**Acute Pulmonary:** Not determined



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Acute Intra-peritoneal:	Not determined
Intravenous:	Not determined
Chronic Effects:	None of the components is known as carcinogenic; does not contain dangerous goods. Not classified by NTP, IARC or OSHA. Non infective and not pathogenic.

### 12. ECOLOGICAL INFORMATION

Environmental Behaviour:	Bacillus sp. are non-toxic natural bacteria.
Mobility and Bio-accumulation potential:	Not determined
Ecotoxic Effects:	Not determined
General Information:	No acute or chronic effects are known.

### 13. DISPOSAL CONSIDERATIONS

Precautions:	None of the ingredients raise concern for the environment.
Disposal of Product:	Unwanted product may be safely disposed of in a land-fill or discarded as non-hazardous waste in accordance with local regulations.

### 14. TRANSPORT INFORMATION

Road/rail:	Not classified as dangerous in the meaning of transport regulations.
IMDG:	Not classified as dangerous in the meaning of transport regulations.
ICAO:	Not classified as dangerous in the meaning of transport regulations.
ADR:	Not classified as dangerous in the meaning of transport regulations.

### 15. REGULATORY INFORMATION

Supply Classification:	None
Hazard Symbols:	None
Risk Phrases:	None
Safety Recommendations:	Handle with care, do not inhale spray mix. Store away from food and foodstuff. Keep out of the reach of unauthorized persons and children. Use protective clothing, gloves and boots when mixing and during application. If skin or eye contact occurs rinse with large amounts of water. Destroy empty containers and do not re-use for any other purpose.

### 16. OTHER INFORMATION



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**Recommended Use:**

Product must be used as indicated:

Rhizosphere inoculant with a unique combination of functional groups involved in optimal rhizosphere resilience and nutrient utilization.

Refer to product label

**Further Information:**

Product classified and safety datasheet produced according to GHS directives.

*The information contained in this SDS was compiled using the latest and most reliable information available to BioSolutions. The data is based on the current expertise and presents the health, safety and environmental aspects of this product. They form no guarantee of product properties. Recommendations presented in this SDS apply only to the product as originally supplied. If other ingredients are used in the processing of this product, the recommendations for the use and handling of that product must be verified.*

*This document contains important information in order to ensure the safe storage, handling and use of this product. The information in this document must be brought to the attention of the safety/health/environmental advisor within your organisation. The information in this document must be made known to everyone whose work involves this product.*