

## 1. Product identification

Product use: *Rhizobium* Inoculant  
MSDS number: NZBC-202  
Effective date: August 1, 2011

## **Cell-Tech**<sup>®</sup> granular pea and lentil

## 2. Composition:

Component	CAS number	OSHA PEL	% (w/w)
Pure culture of <i>Rhizobium leguminosarum</i> bacterium	Not available	10 mg/m <sup>3</sup>	2-3
Peat granule	Not available		97-98

  

Hazardous ingredient	CAS number	OSHA PEL	ACGIH TL V
Crystalline quartz	14808-60-7	10 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>

(Small amounts of quartz are a naturally-occurring component of the carrier substrate.)

**Note:** This product contains beneficial microorganisms. Novozymes exclusively uses non-pathogenic beneficial microorganisms that are considered to be non-allergenic, non-irritating and non-sensitizing when used as directed. Exposure to very high levels of airborne microbial spores may result in very rare respiratory impairments or cause an allergic reaction in sensitized individuals. A Material Safety Data Sheet is supplied with all products.

### Emergency overview:

Granular products contain fungal spores and viable bacterial cells. This product may cause adverse effects to individuals allergic to molds and/of fungi and should not be used by immunocompromised and/or immunosuppressed individuals. Absorption by eye or skin contact, inhalation and ingestion must be prevented at all time when handling this product. Users MUST wear standard protective clothing and equipment including gloves, safety glasses and a NIOSH-approved respirator during product use and storage as well as during equipment maintenance and clean-up. In case of contact with skin or eyes, immediately flush exposed areas with plenty of water. Get medical attention if irritation occurs.

## 3. Hazard identification:

**NFPA:** 1-Health, 1-Flammability, 0-Reactivity

### Potential health effects:

**Eyes:** Low hazard. However, contact may be irritating or cause mechanical abrasion.

**Skin contact:** Low hazard for usual handling.

**Skin absorption:** A single prolonged exposure is not likely to result in this material being absorbed in harmful amounts. Do not expose open cuts or wounds to product.

**Ingestion:** Small amounts swallowed incidental to industrial handling are not likely to cause injury. Ingestion of large amounts may cause stomach discomfort or pain.

**Inhalation:** Prolonged or repeated exposure may cause injury to respiratory tract.

**Chronic effects:** Not a likely hazard

**Cancer:** Not a likely hazard

**Birth defects:** Not available

**Reproductive effects:** Not available

**Mutagenic effects:** Not available

## 4. First aid measures:

**Eyes:** Flush with a continuous gentle stream of water for 5 minutes. If irritation develops, get medical attention.

**Skin:** Wash with plenty of soap and water.

**Ingestion:** Do not induce vomiting unless instructed to do so by qualified medical personnel. If individual is conscious, give plenty of water to drink. Get medical attention if stomach discomfort develops.

**Inhalation:** Move individual to fresh air. Encourage coughing. Get medical attention if breathing difficulty occurs.

**Note to physician:** Employ supportive care. Treatment should be based on the judgment of the physician in response to reactions of the patient.

## 5. Fire-fighting measures:

**Flash point:** Not applicable

**Explosive limits:** Not applicable

**Auto-ignition temperature:** 500°F/ 260°C.

**Extinguishing media:** Use extinguishing media appropriate for controlling the surrounding fire.

**Sensitivity to mechanical impact/static discharge:** Not available

**Unusual fire and explosion hazards:** None known.

**Fire-fighting equipment:** Wear positive-pressure self-contained breathing apparatus and full turn-out gear.

**Special fire fighting procedures:** Standard Fire: Caution, burning may continue inside bag after surface is out. Break bag to separate pile to assure that the fire is extinguished. Take care to keep dusting to a minimum.

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## In Case of Emergency Call: 1-888-744-5662

Available 24 hours a day 7 days a week from April 1<sup>st</sup> to June 15<sup>th</sup>,  
otherwise available from 8:00am to 4:30pm CST, Monday to Friday.

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## 6. Accidental release measures:

Sweep up spills and store in a suitable container until proper disposal can be arranged.

## 7. Handling and storage:

Store any unused product in original unopened containers in a cool, dry place, away from sunlight, drafts and direct heat sources. Practice reasonable caution to avoid contact with this product. Avoid breathing dust if generated. Users should wash hands before eating, drinking, chewing gum, using tobacco or the toilet. Keep out of reach of children. Do not ship or store this product with food, feed, drugs or clothing.

## 8. Exposure controls, personal protection and exposure Limits:

**Rhizobium leguminosarum:** Not available

**Quartz:** OSHA PEL 10 mg/m<sup>3</sup> ACGIH 0.1 mg/m<sup>3</sup>

**Engineering controls:** Good ventilation is required. Avoid generating aerosols during handling.

**Breathing:** Use an approved air-purifying respirator if respiratory irritation is experienced. If aerosols are generated during handling, wear a NIOSH-approved respirator.

**Protective clothing:** Wear clean body-covering clothing and impervious gloves when handling this product.

**Eyes:** Safety glasses with side shields recommended

**Other Protection:** Washing facilities should be available

## 9. Physical and chemical properties:

**Boiling point:** Not applicable

**Vapour pressure:** Not applicable

**Volatility:** Not applicable

**pH:** 6.2-7.2

**Appearance:** Dark brown to black granules

**Odour:** Slight smoky odour

**Bulk density:** 0.7 g/cm<sup>3</sup> (43 lbs/ft<sup>3</sup>)

**Evaporation rate:** Not applicable

**Solubility in water:** Not soluble

**Freezing point:** Not applicable

**Odour threshold:** Not available

**Melting point:** Not applicable

**Physical state:** Solid

**Vapor density:** Not applicable

**Specific Ggavity:** Not available

## 10. Stability and reactivity:

**Stability:** Stable

**Incompatibility:** Acids, bases, oxidizers, reducers, disinfectants, fungicides, and/or biocides may inactivate.

**Hazardous decomposition products:** Thermal decomposition releases CO, CO<sub>2</sub>, hydrocarbons

**Hazardous polymerization:** Does not occur

## 11. Toxicological information:

**Skin absorption:** Not available

**Ingestion:** Oral LD<sub>50</sub> is not available

**Inhalation:** Inhalation LC<sub>50</sub> is not available

## 12. Ecological information:

**Toxicity to bees:** Not available. Not a likely hazard

**Toxicity to fish:** Not available. Not a likely hazard

**Toxicity to birds:** Not available. Not a likely hazard

## 13. Disposal considerations:

This product may be disposed of by placement in any landfill approved for domestic waste.

## 14. Transportation information:

This product is not regulated as a hazardous material for all modes of transportation within the U.S. and Canada.

**Hazard class:** Not applicable

## 15. Regulatory information:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

**Proposition 65:** Contains no components subject to warning requirements.

**Master reference:** On file

**MSDS status:** New MSDS

## 16. Other information:

**Prepared by:** M. Sonier

This information may not be adequate for every application and therefore it is up to the user to determine the suitability of this information based on conditions of use, storage or local regulations.

**Notice:** The information contained in this Material Safety Data Sheet is presented in good faith and is believed to be accurate as of the effective date shown above. However, no other warranty, expressed, or implied, is given. Laws, regulations, and/or third party rights may prevent customers from importing, using, processing and/or reselling the products described herein in a given manner. Without separate written agreement between the customer and Novozymes to such effect this document does not constitute a representation or warranty of any kind and is subject to change without further notice.

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