



Rethink Tomorrow

13100 W. Lisbon Road Suite 600, Brookfield, WI. 53005 USA

# Material Safety Data Sheet

## 1. Product identification

Product use: *Penicillium* Inoculant

MSDS number: NZBWI-110

Effective date: February 1, 2013

## JumpStart® LCO

### 2. Composition:

Component	CAS number	% (w/w)
<b>Active Powder:</b>		
Pure culture of <i>Penicillium bilaii</i> fungus	Not available	3 - 23
Other ingredients	Not available	77 - 97
<b>Liquid component:</b>		
Lipo-chitooligosaccharide (LCO)	Not available	1 x 10 <sup>-7</sup>
Other ingredients (aqueous carrier)	Not available	>99

**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:

Individuals allergic to molds and/or fungi should avoid using this product. If use by allergic individuals is unavoidable, absorption by eye or skin contact, inhalation or ingestion must be prevented to minimize the chance of allergic reaction.

### 3. Hazard identification:

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

#### Potential health effects:

**Eyes:** Contact may cause eye irritation.

**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 this product.

**Ingestion:** Small amounts swallowed incidental to industrial handling are not likely to cause injury.

Ingestion of larger amounts may cause stomach discomfort or pain.

**Inhalation:** Prolonged or repeated exposure may cause injury to the 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 them 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 develops.

**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:** Not applicable

**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.

### 6. Accidental release measures:

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

**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.

## 7. Handling and storage:

Store any unused product in original unopened containers at temperatures below 20°C (68°F) away from sunlight, drafts, and direct heat sources. Practice reasonable caution to avoid contact with this product. Avoid breathing dusts and mists 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:

**Penicillium bilaii:** Not available

**LCO:** Not available

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

**Breathing:** Use an approved air-purifying respirator if respiratory irritation is experienced.

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

**Eyes:** Use safety glasses

**Other protection:** None specified

## 9. Physical and chemical properties:

**Boiling point:** Not applicable

**Vapour pressure:** Not applicable

**Volatility:** Not applicable

**pH:** 7.1

**Appearance:** Light green powder

**Odour:** Slight

**Coefficient of water/oil distribution:** Not available

**Evaporation rate:** Not applicable

**Solubility in water:** Suspends in water

**Freezing point:** Not applicable

**Odour threshold:** Not available

**Melting point:** Not applicable

**Physical state:** Solid

**Vapor density:** Not applicable

**Specific gravity:** Not available

## 10. Stability and Reactivity:

**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.

---

**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.