



Rethink Tomorrow

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

Material Safety Data Sheet

1. Product identification

Product use: Peanut inoculant

MSDS number: NZBWI-406

Effective date: August 1, 2011

Optimize[®] liquid peanut

2. Composition:

Component	CAS number	% (w/w)
Liquid medium of <i>Bradyrhizobium sp.</i> bacterium	Not available	Not available
Lipo-chitooligosaccharide (LCO)	Not available	1×10^{-7}

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.

3. Hazard identification:

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

Potential health effects:

Eyes: Contact may cause eye irritation

Skin contact: Not a likely hazard

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 products.

Ingestion: Not a likely hazard

Inhalation: Not a likely hazard

Chronic effects: Not a likely hazard

Acute 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. 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 available

Explosive limits: Not applicable

Auto-ignition temperature: Not applicable

Extinguishing media: Use extinguishing medium appropriate to control the surrounding fire

Flammable limits in air (% by volume):

lower: Not applicable

upper: Not applicable

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:

Contain the spill with any available absorbent medium and store in a suitable container until proper disposal can be arranged.

7. Handling and storage:

Store any unused product in original unopened containers at temperatures between 4°C (39°F) and 25°C (77°F), away from sunlight, drafts and direct heat sources. **DO NOT** allow to freeze. Practice reasonable caution to avoid contact with this product. 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:

Bradyrhizobium sp.: Not available

LCO: Not available

Engineering controls: Good ventilation is required.

Breathing: Use a NIOSH or MSHA approved air-purifying respirator if respiratory irritation is experienced.

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.

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

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

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9. Physical and chemical properties:

Boiling point: 102 °C (216 °F)
Vapour pressure: Not available
Volatility: Not available
pH: 6-8
Appearance: Yellow to brown
Physical State: Liquid
Odour: Mild
Odour threshold: Not available
Coefficient of water/oil distribution: Not Available
Bulk density: Not available
Evaporation rate: Not available
Solubility in water: Not available
Freezing point: -4°C (25°F)
Melting point: Not applicable
Vapor density: Not available
Specific gravity: Not available

10. Stability and reactivity:

Stability: Stable
Conditions to avoid: None
Hazardous polymerization: Will not occur
Incompatibility: Acids, bases, oxidizers, reducers, disinfectants, fungicides, and/or biocides may inactivate.
Hazardous products of decomposition:
Oxides of carbon

11. Toxicological information:

Eye effects/eye irritation: No data available
Acute oral effects: LD₅₀ (rat) : >5000 mg/kg
Acute inhalation effects: No data available
Acute dermal effects: LD₅₀ (rabbit) : >2000 mg/kg
Skin irritation: Non-irritating
Skin sensitization: Not a skin sensitizer

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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