



Rethink Tomorrow
3935 Thatcher Avenue, Saskatoon, SK. S7R 1A3 Canada

Material Safety Data Sheet

1. Product identification

Product use: *Sinorhizobium* Inoculant
MSDS number: NZBC-501
Effective date: August 1, 2011

Nitragin[®] Gold alfalfa

2. Composition:

Component	CAS number	OSHA PEL	ACGIH TL V
Pure culture of <i>Sinorhizobium meliloti</i>	Not available	10 mg/m ³	0.1 mg/m ³
Hazardous ingredient	CAS number	OSHA PEL	ACGIH TL V
Crystalline quartz	14808-60-7	10 mg/m ³	0.1 mg/m ³

(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.

3. Hazard identification:

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

Potential health effects:

Primary entry routes: Oral (swallowing), inhalation

Eyes: Dust may cause mechanical irritation of eye

Skin: No known hazard

Inhalation: Inhalation of large amounts of dust may cause discomfort

Ingestion: No known hazard

Medical conditions aggravated by exposure:

Respiratory disease

Target organs: Lungs

Chronic effects: Chronic inhalation of quartz dust causes lung disease

Carcinogenicity: Quartz is listed as a carcinogen by NTP and IARC

Birth defects: Not available

Reproductive effects: Not available

Mutagenic effects: Not available

4. First aid measures:

Eyes: Flush eyes with water for at least 15 minutes

Skin: Wash with soap and water

Inhalation: Remove person to fresh air. Get medical attention if irritation persists

Ingestion: No treatment necessary

5. Fire-fighting measures:

Flash point: None

Auto-ignition temperature: Not available

Explosive limits:

LEL: Not applicable UEL: Not applicable

Extinguishing media: Use media suitable for the surrounding fire

Unusual fire or explosion hazards: None known

Fire fighting instructions: No special requirements

6. Accidental release measures:

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

7. Handling and storage:

Storage requirements: Store in original container in a cool, dry place. Use before expiration date printed on package

Handling precautions: No special handling requirements. Follow normal hygiene and housekeeping standards for agricultural products

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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.

8. Exposure controls, personal protection, and exposure limits:

Rhizobium leguminosarum: Not available

Quartz: OSHA PEL 10 mg/m³ ACGIH 0.1 mg/m³

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

Breathing: Users must wear an approved dust-mist filtering respirator/mask (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator/mask with any N-95, R-95, P-95 or HE filter.

Protective clothing/equipment: Dust-proof goggles are recommended when working in dusty conditions

Eyes: Safety glasses with side shields recommended.

Contaminated equipment: Clean application equipment with detergent and water after use

Comments: Practice general personal hygiene after using this product. After handling any chemical or biological product, wash arms, hands and face with soap and water before eating, drinking or smoking

9. Physical and chemical properties:

Physical state: Solid

Water solubility: Insoluble

Colour: White

% Volatile (volume): Not applicable

Odour: Odourless

Specific gravity: 2.4 - 2.7

Melting point: Not available

Vapor pressure: Not applicable

Boiling point: Not applicable

Vapor density: Not applicable

Freezing point: Not applicable

pH: 7.7

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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