

<b>Safety Data Sheet Commercial Product</b>
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## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1. Product identifier

#### Nitragin® Gold Clover Pre-Inoculant

#### 1.1.1. Chemical name

Not applicable.

#### 1.1.2. Synonyms

Nitragin® Gold Pre-Inoculant Nitrogen-Fixing Bacteria for Clover

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## 2. HAZARDS IDENTIFICATION

### 2.1. Classification

Classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200 (2012)

Carcinogenicity - Category 2

STOT SE - Category 3, Respiratory irritant

STOT RE - Category 1

### 2.2. Label elements

#### Hazard pictogram/pictograms



#### Signal word

Danger

#### Hazard statement/statements

H372

Causes damage to lungs through prolonged or repeated exposure

H350

May cause cancer.

H351

Suspected of causing cancer by inhalation

#### Precautionary statement/statements

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe dust

P280

Wear protective gloves/protective clothing/eye protection.

P308+313

If exposed or concerned: get medical advice/attention

P405

Store locked up.

P501

Dispose of contents/container to an installation for the handling of hazardous waste approved by the competent authority

**2.3. Other hazards**

Not applicable.

**2.3.1. Potential other effects**

Read and follow label instructions.

May form combustible dust concentrations in air.

**2.4. Appearance and odour (colour/form/odour)**

White /Solid / No information.

Refer to section 11 for toxicological and section 12 for environmental information.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1. Substance:** Not applicable.

**3.2. Mixture:** Yes.

**Composition/information on ingredients**

Components	CAS No.	Concentration
Bentonite	1302-78-9	70 - 80 %
Crystalline silica	14808-60-7	<1 %
Water	7732-18-5	20 - 30 %
Rhizobium leguminosarum biovar trifolii		0.001 - 1 %

**Active ingredient**

None; {Not applicable}

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**4. FIRST AID MEASURES**

Use personal protection recommended in section 8.

**4.1. Description of first aid measures****4.1.1. Eye contact**

If in eyes, hold eye open and rinse slowly and gently for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

**4.1.2. Skin contact**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Sensitized persons should avoid further contact and reuse of contaminated clothing.

**4.1.3. Inhalation**

Remove to fresh air.

**4.1.4. Ingestion**

Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison center or doctor. Do not give anything by mouth to an unconscious person.

**4.2. Most important symptoms and effects, both acute and delayed****4.2.1. Potential health effects**

**Likely routes of exposure:** Skin contact, eye contact, inhalation

**Eye contact, short term:** Not expected to produce significant adverse effects when recommended use instructions are followed.

**Skin contact, short term:** Not expected to produce significant adverse effects when recommended use instructions are followed.

**Inhalation, short term:** May cause respiratory irritation.

**Single ingestion:** Not expected to produce significant adverse effects when recommended use instructions are followed.

**4.2.2. Medical conditions aggravated by exposure:**

Contains microorganisms which may have the potential to provoke sensitising reactions. Opportunistic infections may occur in patients with compromised immune functions.

**4.3. Indication of any immediate medical attention and special treatment needed**

Not applicable.

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## 5. FIRE-FIGHTING MEASURES

**5.1. Extinguishing media**

**5.1.1. Recommended:** Water, Foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**5.2. Special hazards**

**5.2.1. Unusual fire and explosion hazards**

Minimise use of water to prevent environmental contamination. Environmental precautions: see section 6.

**5.2.2. Hazardous products of combustion**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>), Sulphur oxides (SO<sub>x</sub>), Hydrogen chloride (HCl)

**5.3. Advice for firefighters**

Self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

**5.4. Flash point**

None.

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## 6. ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions**

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

**6.2. Environmental precautions**

Minimise spread. Contain spillage with sand bags or other means. Keep out of drains, sewers, ditches and water ways. Do NOT contaminate water when disposing of rinse waters.

**6.3. Methods for cleaning up**

SMALL QUANTITIES: Flush spill area with water. LARGE QUANTITIES: Absorb in earth, sand or absorbent material. Dig up heavily contaminated soil. Collect in containers for disposal. Flush residues with small quantities of water. Minimise use of water to prevent environmental contamination.

Refer to section 13 for disposal of spilled material.

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## 7. HANDLING AND STORAGE

**7.1. Precautions for safe handling**

Good industrial practice in housekeeping and personal hygiene should be followed. Do NOT taste or swallow. Avoid contact with eyes, skin and clothing. When using do not eat, drink or smoke. Wash hands thoroughly after handling or contact. Wash contaminated clothing before re-use. Avoid breathing

vapours Thoroughly clean equipment after use. Do not contaminate drains, sewers and water ways when disposing of equipment rinse water. Refer to section 13 of the safety data sheet for disposal of rinse water.

Emptied containers retain vapour and product residue. FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

### 7.2. Conditions for safe storage, including any incompatibilities

**Incompatible materials for storage:** Acids, bases, oxidizers, reducers, disinfectants, fungicides, and/or biocides may inactivate this product.

Read label for specific storage conditions. Keep in a cool place. Store in a dry place. Avoid extremely high or low temperatures. Avoid repeated freeze/thaw cycles. Keep away from direct sunlight. Keep away from heat and flame.

### 7.3. Specific end use(s)

Not applicable.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Airborne exposure limits

Components	Exposure Guidelines
Bentonite	TLV (ACGIH): 10 mg/m <sup>3</sup> : inhalable fraction, PNOS (Particulates [insoluble or poorly soluble] Not Otherwise Specified) TLV (ACGIH): 3 mg/m <sup>3</sup> : respirable fraction, PNOS (Particulates [insoluble or poorly soluble] Not Otherwise Specified)
Crystalline silica	TLV (ACGIH): 0.025 mg/m <sup>3</sup> (TWA): respirable fraction
Water	No specific occupational exposure limit has been established.
Rhizobium leguminosarum biovar trifolii	No specific occupational exposure limit has been established.

### 8.2. Exposure controls

#### Engineering controls

No special requirement when used as recommended. If airborne exposure is excessive: Provide local exhaust ventilation.

#### Eye protection:

No special requirement when used as recommended. If there is potential for contact: Wear chemical goggles.

#### Skin protection:

No special requirement when used as recommended. If repeated or prolonged contact: Wear chemical resistant gloves. Chemical resistant gloves include those made of waterproof materials such as nitrile, butyl, neoprene, polyvinyl chloride (PVC), natural rubber and/or barrier laminate.

If there is significant potential for contact: Wear face shield. Wear chemical resistant clothing/footwear.

#### Respiratory protection:

No special requirement when used as recommended. If airborne exposure is excessive: Wear respirator.

When recommended, consult manufacturer of personal protective equipment for the appropriate type of equipment for a given application.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

### 9.1 Information on basic physical and chemical properties

Colour/colour range:	White
Form:	Solid
Odour:	No information.
Odour threshold:	No data.
Physical form changes (melting, boiling, etc.): DATA MUST BE ENTERED	
Flash point:	None.
Explosive properties:	No data.
Auto ignition temperature:	No data.
Self-accelerating decomposition temperature (SADT):	No data.
Oxidizing properties:	No data.
Specific gravity:	Not applicable.
Vapour pressure:	Not applicable.
Vapour density:	Not applicable.
Dynamic viscosity:	Not applicable.
Kinematic viscosity:	Not applicable.
Density:	No data.
Solubility:	Water: Insoluble.
pH:	7.7
Partition coefficient:	No data.

### 9.2 Other information

Evaporation rate:	Not applicable.
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

None

### 10.2 Chemical stability

Stable under normal conditions of handling and storage.

### 10.3 Possibility of hazardous reactions

Hazardous polymerization: Does not occur.

### 10.4 Conditions to avoid

None

### 10.5 Incompatible materials

Incompatible materials for storage: Acids, bases, oxidizers, reducers, disinfectants, fungicides, and/or biocides may inactivate this product.

Compatible materials for storage: see section 7.2.

#### 10.6. Hazardous decomposition products

Hazardous products of combustion: see section 5.

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## 11. TOXICOLOGICAL INFORMATION

This section is intended for use by toxicologists and other health professionals.

### 11.1. Information on toxicological effects

**Acute oral toxicity:** Based on available data classification criteria are not met.

**Acute dermal toxicity:** Based on available data classification criteria are not met.

**Acute inhalation toxicity:** Based on available data classification criteria are not met.

**Skin corrosion/irritation:** Based on available data classification criteria are not met.

**Eye corrosion/irritation:** Based on available data classification criteria are not met.

**Skin sensitization:** Based on available data classification criteria are not met.

**Respiratory sensitization:** Based on available data classification criteria are not met.

**Mutagenicity:** Based on available data classification criteria are not met.

**Carcinogenicity:** Category 2

**Reproductive/Developmental Toxicity:** Based on available data classification criteria are not met.

**Specific Target Organ Toxicity - Single Exposure:** STOT SE - Category 3, Respiratory irritant

**Specific Target Organ Toxicity - Repeated Exposure:** Category 1

**Aspiration hazard:** Based on available data classification criteria are not met.

#### Most important symptoms and effects, both acute and delayed

##### Potential health effects

**Likely routes of exposure:** Skin contact, eye contact, inhalation

**Eye contact, short term:** Not expected to produce significant adverse effects when recommended use instructions are followed.

**Skin contact, short term:** Not expected to produce significant adverse effects when recommended use instructions are followed.

**Inhalation, short term:** May cause respiratory irritation.

**Single ingestion:** Not expected to produce significant adverse effects when recommended use instructions are followed.

**Medical conditions aggravated by exposure:** Contains microorganisms which may have the potential to provoke sensitising reactions. Opportunistic infections may occur in patients with compromised immune functions.

Monsanto has not conducted toxicity studies on this product. Contains microorganisms which may have the potential to provoke sensitising reactions. Opportunistic infections may occur in patients with compromised immune functions. Data obtained on active ingredient(s) are summarized below.

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## 12. ECOLOGICAL INFORMATION

This section is intended for use by ecotoxicologists and other environmental specialists.

### 12.1 Toxicity

No data.

**12.2 Persistence and degradability**

No data.

**12.3 Bioaccumulative potential**

Refer to section 9 for partition coefficient data.

**12.4 Mobility in soil**

No data.

**12.5 Results of PBT and vPvB assessment**

No data.

**12.6 Other adverse effects**

No data.

**12.7 Additional information**

If available, data obtained on similar products and/or on components are summarized below.

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**13. DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods****13.1.1. Product**

Keep out of drains, sewers, ditches and water ways. Recycle if appropriate facilities/equipment available. Burn in proper incinerator. Follow all local/regional/national/international regulations.

**13.1.2. Container**

See the individual container label for disposal information. Emptied containers retain vapour and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed. Empty packaging completely. Triple or pressure rinse empty containers. Do NOT contaminate water when disposing of rinse waters. Ensure packaging cannot be reused. Do NOT re-use containers. Store for collection by approved waste disposal service. Recycle if appropriate facilities/equipment available. Follow all local/regional/national/international regulations.

Use handling recommendations in Section 7 and personal protection recommendations in Section 8.

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**14. TRANSPORT INFORMATION**

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

**Transport of Dangerous Goods Regulations (TDG)**

14.1 **UN No.:** Not applicable.

14.2 **Proper Shipping Name (Technical Name if required):** Not regulated for domestic ground transportation.

14.3 **Transport hazard class:** Not applicable.

14.4 **Packing Group:** Not applicable.

14.5 **Environmental hazards:** Not applicable.

14.6 **Special precautions for the user:** Not applicable.

**IMO**

14.1 **UN No.:** Not applicable.

14.2 **Proper Shipping Name (Technical Name if required):** Not regulated for transport under IMO Regulations.

14.3 **Transport hazard class:** Not applicable.

14.4 **Packing Group:** Not applicable.

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- 14.5 **Environmental hazards: Not applicable.**  
14.6 **Special precautions for the user: Not applicable.**  
14.7 **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.**

#### **IATA/ICAO**

- 14.1 **UN No.:** Not applicable.  
14.2 **Proper Shipping Name (Technical Name if required): Not regulated for transport under IATA/ICAO Regulations.**  
14.3 **Transport hazard class: Not applicable.**  
14.4 **Packing Group:** Not applicable.  
14.5 **Environmental hazards: Not applicable.**  
14.6 **Special precautions for the user:** Not applicable.

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## **15. REGULATORY INFORMATION**

### **15.1. Pest Management Regulatory Agency, Pest Control Products Act [PMRA PCPA]**

Not regulated by PMRA.

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## **16. OTHER INFORMATION**

The information given here is not necessarily exhaustive but is representative of relevant, reliable data.

Follow all local/regional/national/international regulations.

Please consult supplier if further information is needed.

In this document the British spelling was applied.

Revised for new format.

|| Significant changes versus previous edition.

Full denomination of most frequently used acronyms. BCF (Bioconcentration Factor), BOD (Biochemical Oxygen Demand), COD (Chemical Oxygen Demand), EC50 (50% effect concentration), ED50 (50% effect dose), I.M. (intramuscular), I.P. (intraperitoneal), I.V. (intravenous), Koc (Soil adsorption coefficient), LC50 (50% lethality concentration), LD50 (50% lethality dose), LDLo (Lower limit of lethal dosage), LEL (Lower Explosion Limit), LOAEC (Lowest Observed Adverse Effect Concentration), LOAEL (Lowest Observed Adverse Effect Level), LOEC (Lowest Observed Effect Concentration), LOEL (Lowest Observed Effect Level), MEL (Maximum Exposure limit), MTD (Maximum Tolerated Dose), NOAEC (No Observed Adverse Effect Concentration), NOAEL (No Observed Adverse Effect Level), NOEC (No Observed Effect Concentration), NOEL (No Observed Effect Level), OEL (Occupational Exposure Limit), PEL (Permissible Exposure Limit), PII (Primary Irritation Index), Pow (Partition coefficient n-octanol/water), S.C. (subcutaneous), STEL (Short-Term Exposure Limit), STOT SE (Specific Target Organ Toxicity, Single Exposure), STOT RE (Specific Target Organ Toxicity, Repeated Exposure), TLV-C (Threshold Limit Value-Ceiling), TLV-TWA (Threshold Limit Value - Time Weighted Average), UEL (Upper Explosion Limit)