

SAFETY DATA SHEET

DYNA-START® MAX SOYBEAN INOCULANT

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC® – TOLL FREE 1-800-424-9300

1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURED BY:

LOVELAND PRODUCTS, INC.
P.O. Box 1286 • Greeley, CO 80632-1286

24-Hour Emergency Phone: 1-800-424-9300

Medical Emergencies: 1-866-944-8565

U.S. Coast Guard National Response Center: 1-800-424-8802

PRODUCT NAME: DYNA-START® MAX LIQUID SOYBEAN INOCULANT + LCO PROMOTER TECHNOLOGY®

CHEMICAL NAME: BRADYRHIZODIUM JAPONICUM BACTERIUM IN LIQUID MEDIUM WITH LIPO-CHITOLIGOSACCHARIDE

CHEMICAL FAMILY: BENEFICIAL MICROORGANISMS

MSDS Number: 1000354481-12-LPI MSDS Revisions: New

Date of Issue: 10/12/12

Supersedes: New

2. HAZARDS IDENTIFICATION

KEEP OUT OF REACH OF CHILDREN – CAUTION: Ingestion: Harmful if swallowed. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Primary routes of exposure are dermal, inhalation, ingestion.

This product is yellow to brown liquid with mild odor.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name and Synonyms:</u>	<u>Percent Hazardous by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
<u>Non Hazardous</u>			
Bradyrhizobium japonicum bacterium (in liquid medium)	5x10 ⁹ viable cells/gram	not available	not listed
Lipo-chitooligosaccharide	2x10 ⁻⁷	not available	not listed

4. FIRST AID MEASURES

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

If on skin or clothing: 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.

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

If inhaled: Move person to fresh air. If person is not breathing, call 911, or call an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: **1-866-944-8565**. Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use medium appropriate to control surrounding fire. Water can be used to cool fire exposed containers.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None known.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Dike and contain. If uncontaminated, reuse product. If contaminated, absorb spill with clay, sand, or sawdust. Place in a chemical waster container for proper disposal.

CAUTION: Spill area may be slippery.

7. HANDLING AND STORAGE

HANDLING: Practice reasonable caution to avoid contact with this product. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Be sure proper ventilation, respiratory, and eye protection are used. Avoid eye contact. Do not breathe mist.

STORAGE: Store any unused product in original unopened containers at temperatures between 39°F (4°C) and 77°F (25°C). Store away from sunlight, drafts and direct heat sources. **DO NOT** allow to freeze. Keep away from heat, sparks, and flame. Keep away from children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

APPROPRIATE ENGINEERING CONTROLS: Local and general ventilation is recommended. Keep away from sparks and flame.

INDIVIDUAL PROTECTION MEASURES

RESPIRATORY PROTECTION: Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data show exposures are within recommended exposure guidelines.

EYE / FACE PROTECTION: Chemical goggles or shielded safety glasses.

SKIN PROTECTION: Wear protective clothing: long-sleeved shirts and pants, shoes with socks. Wear chemical-resistant gloves. Washing facilities should be provided.

OSHA PEL 8 hr TWA **ACGIH TLV-TWA**
Not listed Not listed

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Yellow to brown liquid with mild odor	SOLUBILITY: Not known
SPECIFIC GRAVITY (Water = 1): Not known	pH: 6 - 8
VAPOR PRESSURE: Not known	MELTING POINT: No Data
FLASHPOINT: Not determined	
VAPOR DENSITY (Air = 1): Not known	
PERCENT VOLATILE (by volume): Not known	
FLAMMABLE LIMITS (LFL & UFL): Lower Flammability Limit: Not known; Upper Flammability Limit: Not known	
AUTO-IGNITION TEMPERATURE: Not known	

DECOMPOSITION TEMPERATURE: Not known

Note: 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 specification items.

10. STABILITY AND REACTIVITY

REACTIVITY: None known.

CHEMICAL STABILITY: Stable

POSSIBILITY OF HAZARDOUS REACTIONS: None known. Will not polymerize.

CONDITIONS TO AVOID: High temperatures. Contact with oxidizing agents

INCOMPATIBLE MATERIALS: Oxidizing agents, acids, bases, reducers, disinfectants, fungicides, and /or biocides may inactivate organisms.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon (CO₂ and CO), hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, skin, ingestion, and/or eye contact.

LC₅₀ (rat): Not determined or available	Dermal LD₅₀ (rabbit): >2000 mg/kg
Oral LD₅₀ (rat): >5000 mg/kg	Aspiration: Not determined
Acute Toxicity Estimates: Not available	Skin Corrosion / Irritation (rabbit): Non-irritating
Serious Eye Damage / Irritation (rabbit): Not determined	
Respiratory or Skin sensitization (guinea pig): Not a skin sensitizer	
Specific Target Organ Toxicity: None known.	

12. ECOLOGICAL INFORMATION

Ecotoxicity: None listed or known.

Persistence and Degradability: Not known.

Bioaccumulative Potential: Not known.

Mobility in Soil: Not known.

13. DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS: This material must be disposed of according to local, state, and federal requirements and procedures.

14. TRANSPORT INFORMATION

UN No.: NOT APPLICABLE

UN PROPER SHIPPING NAME: NOT APPLICABLE

TRANSPORT HAZARD CLASS: NOT APPLICABLE

PACKING GROUP: NOT APPLICABLE

ENVIRONMENTAL HAZARDS: NOT DETERMINED

TRANSPORT IN BULK (ACCORDING TO ANNEX II OF MARPOL 73/78): – IBC CODE: NOT APPLICABLE

Special Precautions (for User): NOT APPLICABLE

U.S. Surface Freight Classification: BACTERIA, SEED OR SOIL INOCULATING (NMFC 20380, CLASS: 60)

15. REGULATORY INFORMATION

CAUTION

16. OTHER INFORMATION

MSDS STATUS: New

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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®LCO Promoter Technology is a registered trademark of Novozymes A/S

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