

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**1.1 PRODUCT IDENTIFIER:**TRADE NAME: **MSO® CONCENTRATE WITH LECI-TECH®****1.2 RECOMMENDED USE:** SPRAY ADJUVANT**1.3 SUPPLIER DETAILS:**

LOVELAND PRODUCTS, INC.

P.O. Box 1286 • Greeley, CO 80632-1286

1.4 24 Hour Emergency Phone: 1-800-424-9300 - **Medical Emergencies:** 1-866-944-8565 - **Product Information:** 1-888-574-2878 (LPI-CUST)
U.S. Coast Guard National Response Center: 1-800-424-8802**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to 29 CFR 1910.1200

Acute Toxicity - Inhalation
Eye Damage/IrritationCategory 4
Category 2BH332
H320**2.2 Label elements**

Signal word:

WARNING

Hazard Statement:

H332 – Harmful if inhaled.
H320 – Causes eye irritation.
H303 – May be harmful if swallowed.
H313 – Maybe harmful in contact with skin.

Precautionary Statement:

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P271 – Use only outdoors or in a well-ventilated area.
P264 – Wash hands and face thoroughly after handling.(Prevention):
Precautionary Statement:P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 – Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P358 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
P337+P313 – If eye irritation persists: Get medical advice/attention.

Precautionary Statement:

(General):

P101+P102+P103 – If medical advice is needed, have product container or label available. Keep out of reach of children. Read label before use

2.3 Other hazards

None known



SAFETY DATA SHEET

SDS NUMBER: 1000011026-17-LPI

SDS REVISIONS: SEC. 8.2

MSO® CONCENTRATE WITH LECI-TECH®

DATE OF ISSUE: 03/27/17

SUPERSEDES: 01/21/16

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Concentration [%]
Phosphatidylcholine	97281-47-5	
Methylated vegetable oil	67784-80-9	
Alcohol ethoxylate	34398-01-1	100.00

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

- 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 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 swallowed:** Call a 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 a 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 an ambulance, then give artificial respiration, preferable by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Causes eye irritation.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565

Take container, label or product name with you when seeking medical attention.

NOTES TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Dry chemical, carbon dioxide (CO₂), alcohol foam, foam, water spray or fog. Do not use water jet as this will spread the fire.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: During a fire, hazardous by-products can be released.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: 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. Keep people away. Isolate fire and deny unnecessary entry.



SAFETY DATA SHEET

MSO® CONCENTRATE WITH LECI-TECH®

SDS NUMBER: 1000011026-17-LPI

SDS REVISIONS: SEC. 8.2

DATE OF ISSUE: 03/27/17

SUPERSEDES: 01/21/16

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers, or watercourses.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination. Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe Handling: Avoid inhalation of mists, vapors / spray and contact with eyes, skin and clothing. Do not breathe mists or vapor. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Store in cool, dry place. Store in original container. Keep tightly closed. Do not reuse empty container. Product will become thicker at cold temperatures but effectiveness will not be affected. Warm product before use. Do not contaminate water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) Guides

Components	Type	Value
No listings	TWA	

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

8.2 EXPOSURE CONTROLS:

Engineering Measures

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.
Skin Protection: Wear protective gloves. Long-sleeved shirt, long pants, and socks.
Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-21C or NIOSH approved respirator with N, R, P or HE filter. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.



SAFETY DATA SHEET

SDS NUMBER: 1000011026-17-LPI

SDS REVISIONS: SEC. 8.2

MSO® CONCENTRATE WITH LECI-TECH®

DATE OF ISSUE: 03/27/17

SUPERSEDES: 01/21/16

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 APPEARANCE :	Liquid
ODOR:	Fatty.
ODOR THRESHOLD:	No data available.
COLOR:	Yellow.
pH:	6.9 (1% solution)
MELTING POINT / FREEZING POINT:	No data available
BOILING POINT:	>200°F (>93.4°C)
FLASH POINT:	>212°F (>100°C) / TCC
FLAMMABILITY (solid, gas):	No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	No data available.
VAPOR PRESSURE:	No data available.
SOLUBILITY:	Emulsifies
PARTITION CO-EFFICIENT, n-OCTANOL / WATER:	No data available.
AUTO-IGNITION TEMPERATURE:	No data available.
DECOMPOSITION TEMPERATURE:	No data available.
VISCOSITY, kinematic:	115.5 centistokes @ 68°F (20°C)
SPECIFIC GRAVITY (Water = 1):	0.90 g/ml
DENSITY:	7.51 lbs./gal / 0.9 kg/L

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

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No reactions known under normal use conditions. Will not polymerize.

10.4 CONDITIONS TO AVOID

High alkaline conditions.

10.5 INCOMPATIBLE MATERIALS

Strong oxidizers.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

None known.

11. TOXICOLOGICAL INFORMATION

11.1 LIKELY ROUTES OF EXPOSURE

Eye contact. Skin contact.

LC₅₀ (rat): >2.01 mg/L (4 HR)

LD₅₀ Oral (female rat): >2,000 mg/kg

LD₅₀ Dermal (rat): >4,000 mg/kg

Acute Toxicity Estimates: No data available

Skin Irritation (rabbit): May be irritating.

Eye Irritation (rabbit): Irritating.

Specific Target Organ Toxicity: Single exposure: No data available.

Aspiration: No data available

Skin Sensitization (mouse): Not a sensitizer

Carcinogenicity: No data available

Germ Cell Mutagenicity: No data available

Interactive Effects: None known



SAFETY DATA SHEET

M50® CONCENTRATE WITH LECI-TECH®

SDS NUMBER: 1000011026-17-LPI

SDS REVISIONS: SEC. 8.2

DATE OF ISSUE: 03/27/17

SUPERSEDES: 01/21/16

12. ECOLOGICAL INFORMATION

12.1 ECOTOXICITY

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Ecotoxicological Data

Species	Test Results
No data available.	

Drift or runoff may adversely affect non-target plants.
Do not apply directly to water.
Do not contaminate water when disposing of equipment wash water.
Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: No data available

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

12.4 MOBILITY IN SOIL

No data available.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrecycle.org/>. Do not contaminate water, food or feed by storage or disposal.

14. TRANSPORT INFORMATION

14.1 LAND TRANSPORT

DOT Shipping Description: NOT REGULATED.

U.S. Surface Freight Classification: ADHESIVES, ADJUVANTS, SPREADERS OR STICKERS (NMFC 4610; CLASS 60)

15. REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS

NFPA & HMIS Hazard Ratings:

NFPA

HMIS

1 Health	0 Least	1 Health
0 Flammability	1 Slight	0 Flammability
0 Instability	2 Moderate	0 Reactivity
	3 High	B PPE
	4 Severe	

SARA Hazard Notification/Reporting

SARA Title III Hazard Category:	Immediate <u>Y</u>	Fire <u>N</u>	Sudden Release of Pressure <u>N</u>
	Delayed <u>N</u>	Reactive <u>N</u>	

Reportable Quantity (RQ) under U.S. CERCLA: Not listed

SARA, Title III, Section 313: Not listed

RCRA Waste Code: Not listed

CA Proposition 65: Not applicable



SAFETY DATA SHEET

SDS NUMBER: 1000011026-17-LPI

SDS REVISIONS: SEC. 8.2

M^{SO}® CONCENTRATE WITH LECI-TECH®

DATE OF ISSUE: 03/27/17

SUPERSEDES: 01/21/16

16. OTHER INFORMATION

SDS STATUS: Section 8.2 revised

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

@MSO and @Leci-Tech are registered trademarks of Loveland Products, Inc.

CA REG. NO.: 34704-50053

WA REG. NO.: 34704-07001

Disclaimer and Limitation of Liability: This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.