

# SAFETY DATA SHEET



## 1. IDENTIFICATION OF MATERIAL AND SUPPLIER

<b>Product Identifier:</b>	SoluLac™ Ethyl Lactate
<b>Other Name(s):</b>	Ethyl-(S)-lactate
<b>Recommended Use:</b>	General Industrial
<b>Recommended Restrictions:</b>	no information available
<b>Supplier Name:</b>	JRW Bioremediation, LLC
<b>Address:</b>	14321 W. 96 <sup>th</sup> Terrace Lenexa, KS 66215
<b>Telephone:</b>	913-438-5544
<b>EMERGENCY Telephone:</b>	800-779-5545 x 113 (Mon-Fri 9am-5pm CST) 913-526-1093 (afterhours)

## 2. HAZARD IDENTIFICATION

### Health & Physical Hazards and precaution:

This product contains substances in their current physical state that are considered to be possibly hazardous to health. Keep container tightly closed. Can cause serious eye damage and possible respiratory irritation. Use in well-ventilated area or outdoors and avoid breathing dust/fumes/gas/mists/vapors/spray. Wear full protective clothing protective eyewear, and positive pressure breathing apparatus

### Hazard statements:

Flammable Liquid and vapor  
Causes serious eye damage  
May cause respiratory irritation

### Flammability Hazards and Precaution:

This is a Flammable liquid and vapors. Keep away from: heat, sparks, heated surfaces, open flame. Use only non-sparking tools and use precautionary measures against static electricity. Container and applicable equipment should be grounded. No smoking in proximity to this product.

**Reactivity Hazards:**

This product is considered stable. This product is considered incompatible with: Acids, strong bases, organic materials, and oxidizing agents. Hazardous byproducts are Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>).

**OSHA Hazards:**

This material is considered hazardous by OSHA Hazard Communication Standard (29 CFR 1910.1200). DANGER Labels and signage are required:

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Components	CAS #	% by Weight
Ethyl lactate	687-47-8	100%

**4. FIRST-AID MEASURES****Inhalation:**

May cause moderate nose, throat, and lung irritation. Inhalation of vapors and/or aerosols in high concentration may cause irritation of respiratory system. Move to fresh air and keep at rest in position comfortable for breathing. If breathing has stopped or labored, give assisted respirations. Supplemented oxygen may be indicated. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation immediately. Contact MEDICAL PERSONNEL IMMEDIATELY.

**Skin Contact:**

In case of contact with skin, may cause mild skin irritation. Immediately wash with soap and water for at least 20 minutes while removing contaminated clothing and any extraneous chemical, if possible to do so without delay. Seek medical attention if skin Irritation develops or persists.

**Eye Contact:**

Contact with eyes may cause mild irritation, with risk of serious damage to eyes. In case of contact with eyes, immediately flush eyes with water for at least 20 minutes, lifting eyelids to facilitate irrigation. Remove contact lenses. Immediately call POISON CONTROL or doctor/physician.

**Ingestion:**

If swallowed, get immediate medical attention. Rinse mouth repeatedly.

**Signs and symptoms of exposure:**

Repeated and/or prolonged exposure to low concentrations of vapors and/or aerosols may cause sore throat. Treat symptomatically.

**Medical Conditions aggravated by exposure:** ASTHMA.

<b>5. FIRE-FIGHTING MEASURES</b>
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**Suitable Extinguishing Media:** Water spray, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>), dry chemical, dry sand, limestone powder.

**Unsuitable Extinguishing Media:** Do not use heavy water stream as it may spread or scatter.

**Specific hazards from substance/mixture:** Thermal decomposition may lead to release of irritating or toxic gases and vapors.

**General fire hazards:** Evacuate non-essential personnel. Incomplete combustion may form carbon monoxide. Fire or intense heat may cause violent rupture of packages. Flash back possible over considerable distance. May form explosive mixtures in air. In the event of fire, move tanks away or cool tanks with water spray but only if able to do without risk. Prevent fire-extinguishing water from contamination surface or groundwater systems

**Special protective equipment / precautions for fire-fighters:** Wear full protective clothing and self-contained positive pressure breathing apparatus.

**Sensitivity to Static Discharge:** M be ignited by heat, sparks, or flame.

## 6. ACCIDENTAL RELEASE MEASURES

### **Methods and Materials for containment and clean up:**

See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protections Association, Boston, MA. Contain spill with inert absorbent materials such as; dry sand, Vermiculite, activated charcoal. Place material in appropriate chemical waste container for disposal. Following product recovery, flush area with water. Dispose of according to all local, state, and federal regulations at an approved waste treatment facility.

### **Personal precautions / Protective equipment:**

If possible, stop flow of product. Approach suspected leak areas with caution. Contact Emergency response center for advice. Evacuate personnel to safe areas. Use personal protective equipment. Prevent spills, contamination, and leakage. Avoid breathing vapors and/or aerosols. Avoid contact with eyes.

### **Environmental precautions:**

Prevent further leakage or spillage only if safe to do so.

## 7. HANDLING AND STORAGE

### **Precautions for safe handling:**

See "Flammable and Combustible Liquid Code" NFPA No. 30, National Fire Protections Association, Boston, MA. Emergency showers and eye wash stations should be readily accessible. Adhere to work practice rules established by government regulations.

Observe good industrial hygiene and safety practices, using personal protective equipment to avoid contact with skin, eyes, and clothing. Use only in well-ventilated areas. Avoid breathing mists and vapors. Wash hands after use of this product. Do not eat, drink, or smoke while using product. Prevent spills, contamination, and leakage.

### **Conditions for safe storage, including any incompatibilities:**

Store in accordance with local regulations. Keep container tightly closed, in properly labeled containers. Store in a dry, cool, well-ventilated area. Keep away from heat, open flames, and sources of ignition. Keep under an inert atmosphere, at temperatures below 56<sup>o</sup> C/132.8<sup>o</sup> F. Keep away from oxidizers, heat, strong bases, and organic materials. Vapors may form explosive mixtures with air. Use spark-proof tools and explosion-proof equipment.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Appropriate engineering controls:</b>	Use adequate mechanical ventilation, especially in confined spaces. Local exhaust is recommended as well as eyewash and safety showers near workstations. Temperatures best kept below 56° C or 132° F.
<b>Individual protection measures, such as Personal Protective Equipment (PPE):</b>	
Eye/Face protection:	Chemical goggles required
Skin / hand / body protection:	Protective gloves (EN 374); Butyl rubber. Glove thickness: 0.5mm. Break through-time: >8 hours. Long sleeve shirts and trousers without cuffs. Use explosion-proof equipment. Suitable protective clothing as further defined by employer.  Unsuitable materials: Fluorinated rubber, natural rubber, PVC, Nitrile rubber.
Respiratory protection:	Use only in well-ventilated areas. Provide natural or explosion-proof ventilation adequate to ensure concentrations are kept below exposure limits. Wear appropriate respirator (EN141) when ventilation is inadequate. Recommend Filter Type A, Brown.
General considerations:	Use good industrial hygiene and best safety practices. Avoid direct contact with skin. When using material, do not eat, drink, or smoke. Provide readily accessible eye wash stations and safety showers near workstation. Remove and wash any contaminated clothing before storage or re-use.
<b>Environmental exposure controls:</b>	This product should not be allowed to enter drains, water courses, or the soil.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear, colorless
<b>Physical state:</b>	liquid
<b>Odor:</b>	mild, sweet odor, esters
<b>Odor threshold:</b>	0.18 ppm
<b>pH:</b>	7.0 - 7.5
<b>Specific gravity (H<sub>2</sub>O = 1):</b>	1.033
<b>Melting point:</b>	-3 °F (-26 °C)
<b>Initial boiling point:</b>	309°F (153 °C)
<b>Flash point:</b>	56 °C / 132.8 °F (Closed cup, ISO 2719)
<b>Auto Ignition:</b>	752 °F (400 °C)
<b>Evaporation rate:</b>	not determined
<b>Flammability (solid, gas):</b>	not determined
<b>Upper flammability or explosive limits:</b>	11.4% V
<b>Lower flammability or explosive limits:</b>	1.5% V
<b>Vapor pressure (Mg Hg):</b>	2.7 mBar (@20°C / 68 °F) 172 mBar (@100°C / 212 °F)
<b>Vapor density (air = 1):</b>	not determined
<b>Relative Density:</b>	1.03 (water=1)
<b>Density:</b>	1.036 g/cm <sup>3</sup> (@20°C / 68 °F)
<b>Viscosity</b>	2.8 mPa.s @20 °C
<b>Molecular Weight:</b>	118.15
<b>Solubility in water:</b>	Completely soluble
<b>Auto-ignition temperature:</b>	752 °F
<b>Decomposition temperature:</b>	not determined
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	1.03 H <sub>2</sub> O=1 @ 20°C
<b>Explosive Properties</b>	May form explosive mixtures with air (>127 °C / > 152°F)

## 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Non-reactive under conditions of normal use, storage & transport.
<b>Chemical stability:</b>	Stable under conditions of normal use, storage and transport.
<b>Possibility of hazardous reactions:</b>	
<b>Conditions to avoid:</b>	Heat, flames, sparks, temperatures above >56 <sup>0</sup> C / >132 °F
<b>Incompatible materials:</b>	Avoid Acids, Strong bases, Organic materials
<b>Hazardous decomposition products:</b>	Carbon Oxides

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects are expected if the product is used as intended and in accordance with this Safety Data Sheet.

**Inhalation:** No known effects but if symptoms are experienced, remove source of contamination or move to fresh air. May cause respiratory irritation. Seek medical attention if any difficulties breathing.

**Ingestion:** No known effect. If swallowed, get medical attention.

**Skin:** No known effect. In case of contact with skin, immediately wash with plenty of soap and water while removing contaminated clothing. Seek medical attention if skin irritation develops or persists.

**Eye contact:** Causes serious eye damage: In case of contact with eyes, immediately flush eyes with water for at least 15 minutes, lifting eyelids to facilitate irrigation. Get medical attention immediately.

### Signs & symptoms of exposure:

**Carcinogenicity:** Contains no known ingredient listed as carcinogen.

**Mutagenicity:** No known effect.

**Reproductive Toxicity:** No known effect.

## 12. ECOLOGICAL INFORMATION

**Eco toxicity:** Product is not considered environmentally hazardous and is not expected to cause significant harm to aquatic, animal, or plant life.

**Persistence/degradability:** Readily biodegradable.

**Bio accumulative potential:** Not expected to bio concentrate or bio accumulate.

**Mobility in soil:** No specific information available.

## 13. DISPOSAL CONSIDERATIONS

### Disposal Methods:

If possible, stop flow of product. Approach suspected leak areas with caution. Contact Emergency response center for advice. Evacuate personnel to safe areas. Contain by absorption with inert absorbent materials such as; dry sand, Vermiculite, activated charcoal. Place material in appropriate chemical waste container for disposal. Dispose of according to all local, state, and federal regulations at an approved waste treatment facility.

## 14. TRANSPORTATION INFORMATION

<b>DOT hazard class:</b>	<b>Class 3 Hazard</b>
<b>Labeling:</b>	UN1192
<b>Proper Shipping Name:</b>	SoluLac™ Ethyl Lactate
<b>NMFC#:</b>	46400.02
<b>Class</b>	70
<b>Packing Group:</b>	III

## 15. REGULATORY INFORMATION

### Federal Regulations:

<b>SARA 311/312 Hazards:</b>	<b>Acute Health Hazard</b>	<b>NO</b>
	<b>Chronic Health Hazard</b>	<b>NO</b>
	<b>Fire Hazard</b>	<b>YES</b>
	<b>Reactive Hazard</b>	<b>NO</b>

**Clean Water Act:** Product does not contain any substance regulated as pollutants (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA:** This material as supplied, does not contain any substances regulated as hazardous (CERLA and 40 CFR302)

### State Regulations:

**California Proposition 65** This material as supplied, does not contain any Prop 65 Chemicals

### International Regulations:

**CANADA** This material has been classified in accordance with the Hazard criteria of CPR and this SDS contains all information required by CPR.

**WHMIS**

B3	Combustible Liquid
D2B	Toxic Materials
E	Corrosives

**Other regulations:** No information available or not applicable.

## 16. OTHER INFORMATION

The information in this SDS summarizes to the best of our knowledge at the date of issue, the chemical health and safety hazards of this material and general guidance for safe handling, use, processing, storage, transportation, disposal, and release. This information is not intended to be considered a warranty or quality specifications. The information contained relates only to the specific material designated and may not be valid if used in conjunction with other materials or in any other processes other than intended use. If further clarification or information is required, please contact JRW Bioremediation.