Ethyl Levulinate MSDS

1. Product Name and Identification

Product Name: Ethyl Levulinate
Synonyms: Levulinic acid ethyl ester
Chemical Formula: C7H12O3
CAS Number: 539-88-8
Manufacturer/Supplier: [Insert Name Here]
Emergency Contact: [Insert Contact Information]

2. Composition/Ingredients

Chemical Name: Ethyl Levulinate
Concentration: ≥ 98%
Molecular Weight: 144.17 g/mol
Hazardous Impurities: None identified

3. Hazards Identification

Hazard Classification:

- Flammable Liquid (Category 3)
- Skin and Eye Irritant (Category 2)

Label Elements:

- **Signal Word**: Warning
- **Hazard Statements**:
  - H226: Flammable liquid and vapor.
  - H315: Causes skin irritation.
  - H319: Causes serious eye irritation.
- **Precautionary Statements**:
  - P210: Keep away from heat, sparks, open flames, and hot surfaces.
  - P280: Wear protective gloves and eye protection.
  - P305 + P351 + P338: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

4. First Aid Measures

General Advice: If adverse symptoms appear, seek medical attention immediately.

- **Inhalation**: Move the person to fresh air. If breathing is difficult, provide oxygen and seek medical attention.
- **Skin Contact**: Wash with soap and water. Remove contaminated clothing and wash before reuse.
- **Eye Contact**: Rinse carefully with water for at least 15 minutes. Seek medical advice if irritation persists.
- **Ingestion**: Rinse mouth and do not induce vomiting. Seek medical assistance promptly.

5. Handling and Storage

Handling:

- Use in well-ventilated areas.
- Avoid inhalation of vapors and contact with skin or eyes.
- Keep away from flames, sparks, and static discharge.

Storage:

- Store in a cool, dry, and well-ventilated area.
- Keep containers tightly closed.
- Store away from incompatible materials such as strong acids and oxidizers.

6. Exposure Controls/Personal Protection

Exposure Limits: No specific limits established.

Engineering Controls:

- Ensure proper ventilation in workspaces. Use fume hoods if available.

Personal Protective Equipment (PPE):

- **Eye Protection**: Safety goggles.
- **Skin Protection**: Protective gloves (e.g., nitrile).
- **Respiratory Protection**: Use an approved respirator in poorly ventilated areas.
- **Hygiene Measures**: Shower and wash thoroughly after handling. Do not eat or drink while using this product.

7. Physical and Chemical Properties

- **Appearance**: Colorless liquid
- **Odor**: Fruity, sweet odor
- **pH**: Neutral
- **Melting Point**: -44°C
- **Boiling Point**: 206°C

- **Flash Point**: ~82°C (closed cup)
- **Solubility**: Slightly soluble in water; miscible with many organic solvents
- **Density**: 1.027 g/cm³
- **Vapor Pressure**: Low

8. Stability and Reactivity

Stability: Stable under standard conditions of storage and use.
Reactivity: May react with strong oxidizing agents or acids.

Conditions to Avoid:

- High temperatures.
- Ignition sources.

Hazardous Decomposition Products: May emit carbon monoxide and carbon dioxide when heated to decomposition.

9. Toxicological Information

Acute Toxicity:

- LD50 (Oral, Rat): >5,000 mg/kg (estimated).

Skin: May cause irritation upon prolonged exposure.
Eyes: Causes irritation.
Respiratory: Prolonged inhalation may irritate the respiratory tract.

Chronic Effects: No chronic effects noted in standard studies.

10. Disposal Considerations

Waste Disposal Methods:
Dispose of contents/container in accordance with local, regional, and federal regulations. Contact a licensed waste disposal service for advice.

Do Not: Dispose of in untreated sewers or waterways.

Empty Containers: Triple rinse before disposal. Do not reuse.

Note: Always follow applicable regulations when disposing of hazardous materials.
