



## MATERIAL SAFETY DATA SHEET

### 1. PRODUCT AND COMPANY IDENTIFICATION:

<b>PRODUCT CODE</b>	N0213
<b>PRODUCT NAME</b>	NAT. ETHYL PYRUVATE
<b>SUPPLIER</b>	Shanghai M & U International Trade Co., Ltd. Rm 1717, No 598 North NuJiang Road 200333 Shanghai, China +86-21-32515501 32515502 sales@mu-intel.com

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

### 2. HAZARD IDENTIFICATION:

#### Emergency Overview

#### OSHA Hazards

Combustible Liquid

#### GHS Classification

Flammable liquids (Category 3)

#### GHS Label elements, including precautionary statements

Pictogram

Signal word                      Warning

#### Hazard statement(s)

H226                      Flammable liquid vapor.

#### Precautionary statement(s)

None

#### HMIS Classification

Health hazard              1

Flammability                2

Physical hazards            2

#### NFPA Rating

Health hazard              1

Fire                            2

Reactivity Hazard          0

#### Potential Health Effects

Inhalation                    May be harmful if inhaled. May cause respiratory tract irritation.

Skin                            May be harmful if absorbed through skin. May cause skin irritation

Eyes                            May cause eye irritation.

Ingestion                      May be harmful if swallowed

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS:

**Formula** C5 H8 O3  
**Molecular Weight** 116.12g/mol

CAS-No	EC-No	Index-No.	Concentration
617-35-6	210-511-2		

### 4. FIRST-AID GUIDE:

#### **General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

#### **In case of skin contact**

Wash off with soap and plenty of water.

#### **In case of eye contact**

Flush eyes with water as a precaution.

#### **If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIRE-FIGHTING GUIDE:

#### **Conditions of flammability**

Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/ hot surface. No smoking.

#### **Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### **Special protective equipment for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

#### **Hazardous combustion products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides

#### **Further information**

Use water spray to cool unopened containers.

### 6. ACCIDENTAL RELEASE GUIDE:

#### **Personal precautions**

Avoid breathing vapors, mist or gas. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

#### **Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE:

### **Precautions for safe handling**

Avoid inhalation of vapor mist.

Keep away from sources of ignition-No smoking. Take measures to prevent the build up of electrostatic charge.

### **Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

## 8. EXPOSURE AND PERSONAL PROTECTION:

Contains no substances with occupational exposure limit values.

### **Personal protective equipment:**

#### **Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### **Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### **Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### **Skin and body protection**

Impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected standards such as NIOSH (US) or EN 166 (EU).

#### **Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

### **Appearance**

Form

LIQUID

Color

COLORLESS TO PALE YELLOW

### **Safety data**

Melting point (°C)

-58

Boiling point (°C)	145
Flash point (°F) Closed cup	126
Vapor pressure (mmHg@20°C)	4.0
Density @25 °C	1.045
Water solubility	SLIGHT
Vapor Density	no data available
Odor	PUNGENT, ESTER-LIKE

## 10. STABILITY AND REACTIVITY:

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

Heat, flames and sparks.

### Materials to avoid

Oxidizing agents, Bases, Acids.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## 11. TOXICOLOGICAL INFORMATION:

### Carcinogenicity

IARC:

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP:

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA:

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

### Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Additional Information

RTECS: Not available

## 12. DISPOSAL RECOMMENDATIONS:

### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

### Contaminated packaging

Dispose of as unused product.

## 13. TRANSPORTATION INFORMATION:

### DOT (US)

UN number: 1993    Class:3    Packing group: III

Proper shipping name: Flammable liquid, n.o.s.

### IMDG

UN number:1993    Class: 3    Packing group: III EMS-No: F-E, S,-D

Proper shipping name: FLAMMABLE LIQUID N.O.S.

### IATA

UN number: 1993    Class: 3    Packing group:III

Proper shipping name: Flammable liquid n.o.s

## 14. REGULATORY INFORMATION:

### OSHA Hazards

Combustible Liquid

### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Fire Hazards

### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

### Pennsylvania Right To Know Components

Ethyl pyruvate	CAS-No.	Revision Date
	617-35-6	

### New Jersey Right To Know Components

Ethyl pyruvate	CAS-No.	Revision Date
	617-35-6	

### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**15. OTHER INFORMATION:**

The information in this MSDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the MSDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the MSDS. The user should review these regulations to ensure full compliance.