**LINYI JINYIMENG BIOTECHNOLOGY CO.,LTD.**

Add:No.99 Xingda West St., Linshu County,Shandong Province, China

Tel：0086-539-6213068 Fax：0086-539-6268070 6268051

E-mail: business@goldym.com Http//www.goldym.com

# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME：**ETHYL ACETATE**
Molecular formula: $C_4H_8O_2$
Molecular Weight: 88.10
CAS No.: 141-78-6
UN NO.: 1173

## 2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided.)
Weight % : 99.85%
Component : ethyl acetate
CAS Registry No. :141-78-6

## 3. HAZARDS IDENTIFICATION

WARNING!
FLAMMABLE LIQUID AND VAPOR
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT
PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE DRYING, CRACKING, OR IRRITATION
HMIS. Hazard Ratings: Health -1, Flammability -3, Chemical Reactivity -0
NOTE: HMIS. rating involves data interpretations that may vary from company to company. They are intended
only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe
handling of this material, all the information contained in this MSDS must be considered.

## 4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.
Eyes: In case of irritation from airborne exposure, move to fresh air. If easy to do, remove contact lenses. Get medical attention if symptoms persist.
Skin: Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Ingestion: Seek medical advice.

## 5. FIRE FIGHTING MEASURES

Extinguishing Media: water spray, dry chemical, carbon dioxide, foam
Special Fire-Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire.
Hazardous Combustion Products: carbon dioxide, carbon monoxide

Unusual Fire and Explosion Hazards: Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.
Sensitivity to Static Discharge: Material is unlikely to accumulate a static charge which could act as an ignition source.

**6. ACCIDENTAL RELEASE MEASURES**

Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.
For Large Spills: Use water spray to disperse vapors and dilute spill to a nonflammable mixture. Prevent runoff from entering drains, sewers, or streams.

**7. HANDLING AND STORAGE**

Personal Precautionary Measures: Avoid breathing high vapor concentrations. Avoid prolonged or repeated contact with skin. Use only with adequate ventilation. Wash thoroughly after handling.
Prevention of Fire and Explosion: Keep away from heat, sparks, and flame. Use only with adequate ventilation. Keep from contact with oxidizing materials. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.
Storage: Keep container tightly closed.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Country specific exposure limits have not been established or are not applicable unless listed below.
ETHYL ACETATE
US. ACGIH Threshold Limit Values
Time Weighted Average (TWA): 400 ppm, 1,440 mg/m3
US. NIOSH: Pocket Guide to Chemical Hazards
Recommended exposure limit (REL): 400 ppm, 1,400 mg/m3
US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
PEL: 400 ppm, 1,400 mg/m3
US. OSHA Table Z-1-A (29 CFR 1910.1000)
Time Weighted Average (TWA): 400 ppm, 1,400 mg/m3
Ventilation: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.
Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: organic vapor
Eye Protection: Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.
Skin Protection: For operations where prolonged or repeated skin contact may occur, chemical-resistant gloves should be worn. Contact glove manufacturer for specific information.
Recommended Decontamination Facilities: eye bath, washing facilities, safety shower

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Form: liquid
Color: colorless
Odor: ester,no peculiar smell;
Odor Threshold: 3.9 ppm
Specific Gravity: 0.897-0.902(20 °C)
Vapor Pressure: 20 °C; 99 mbar

Vapor Density: 3.04
Freezing Point: -83 °C
Boiling Point: 77.2 °C
Evaporation Rate: 4.1 (n-butyl acetate = 1 )
Solubility in Water: moderate
Octanol/Water Partition Coefficient: P: 5.4; log P: 0.73
Flash Point: -4 °C (Tag closed cup)
Autoignition Temperature: 485 °C (ASTM D2155)
Thermal Decomposition Temperature: (DTA) No exotherm to 500° C

**10.STABILITY AND REACTIVITY**

Stability: Stable.
Incompatibility: Material reacts with strong oxidizing agents, strong acids, strong bases.
Hazardous Polymerization: will not occur

**11.TOXICOLOGICAL INFORMATION**

Toxicity data are not available unless listed below.
Oral LD-50:(rat) 5,600 mg/kg
Inhalation LC-50: (rat) 6 h: 16000 ppm
Dermal LD-50: ( rabbit) >20 mL/kg (highest dose tested)
Skin Irritation (rabbit) very slight
Eye Irritation (rabbit) slight
Skin Sensitization: (human) none

**12.ECOLOGICAL INFORMATION**

Oxygen Demand Data:
BOD-5: 1,240 mg/g
BOD-20: 1,240 mg/g
BOD-20: 1,430 mg/g
COD: 1,540 mg/g
ThOD: 1,820 mg/g
Acute Aquatic Effects Data:
48 h LC-50 (golden orfe): 270 mg/l
48 h LC-50 (golden orfe): 333 mg/l
24 h LC-50 (daphnid): 3090 mg/l
24 h EC-50 (daphnid): 3090 mg/l

**13.DISPOSAL CONSIDERATIONS**

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container. Since emptied containers retain product residue, follow label warnings even after container is emptied., This material and its container must be disposed of in a safe way.

14.TRANSPORT INFORMATION

Marine pollutant components: none unless listed below
Reportable Quantity: 2,270 kg
DOT (USA): Class 3 Packing group II
TDG (Canada): Class 3 Packing group II
ICAO Status: Class 3 Packing group II
IMDG Status: Class 3 Packing group II

15.REGULATORY INFORMATION
WHMIS (Canada) Status: controlled
WHMIS (Canada) Hazard Classification: B/2
SARA 311-312 Hazard Classification(s):
immediate (acute) health hazard
fire hazard
SARA 313: none, unless listed below
Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below
MSDSUSA/ANSI/EN/150000016673/Version 2.0
ACGIH (American Conference of Governmental Industrial Hygienists): not classifiable as a human carcinogen
TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.
DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act): This product is listed on the DSL. Any impurities present in this product are exempt from listing.
EINECS (European Inventory of Existing Commercial Chemical Substances): This product is listed on EINECS.
EINECS Number: 205-500-4
AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme): This product is listed on AICS or otherwise complies with NICNAS.
MITI (Japanese Handbook of Existing and New Chemical Substances): This product is listed in the Handbook or has been approved in Japan by new substance notification.

**16.OTHER INFORMATION**

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.

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