



Asia Petrochemicals LLC

## Material Safety Data Sheet (MSDS)

**Trade Name: Ethyl Acetate**

### SECTION 1: Identification of the Substance/Mixture and Company

#### 1.1 Product Identifier

**Trade name: Ethyl Acetate**

**CAS Number: 141-78-6**

#### Application of the substance / the mixture

In Printing Inks

In manufacture of Paints & Coatings

In Laminates, Flexible packaging, and Aluminum foils

In manufacture of pesticides, pharmaceuticals, Adhesives

In organic syntheses

#### 1.2 Details of the supplier of the Safety Data Sheet:

##### Manufacturer/Supplier:

Manufacturer:

Asia Petrochemicals LLC

PO Box 76283 Dubai UAE

T +971 4 2384533 F +971 4 2384534

Email : info@asia-petrochem.com

Supplier:

Asia Petrochemicals LLC

PO Box 76283 Dubai UAE

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Email : info@asia-petrochem.com

### SECTION 2: Hazards Identification

Labeled Contents:



**Symbols:** Flame, exclamation point

**Warning:** Danger

**Hazard Warning Information:** Highly flammable liquid and vapor produces eye irritation

**Hazard Prevention Measures:** Place container in a well-ventilated area.

Keep away from inflammables. – Smoking prohibited.

Avoid contact with eyes.



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### **SECTION 3: Composition/Information on Ingredients**

**3.1 Chemical Name: ETHYL ACETATE**

**CAS No. :** 141-78-6

**Description:** Ethyl Acetate

**Percentage for Chemical Ingredient (%):** 100%

### **SECTION 4: First Aid Measures**

#### **4.1 Description of first Aid Measures**

##### **After inhalation:**

1. If the victim is unconscious or unresponsive, take measures to ensure one's own safety before administering first-aid.
2. Remove the pollution source or the patient to a place with fresh air.
3. If breathing has stopped, apply artificial respiration by trained professionals immediately. If the heart has stopped, apply cardiopulmonary resuscitation.
4. Seek medical attention immediately.

##### **After skin contact:**

1. Remove soiled clothes, shoes, and leather accessories (such as watchstraps, belts).
2. Use gentle, running warm water to rinse the injured area for more than 10 minutes as soon as possible.
3. If irritation persists, seek medical attention immediately.
4. The soiled clothes, shoes, and leather accessories should be cleaned before re-use or disposal.

##### **After eye contact:**

1. Quickly and gently absorb or sweep the excess chemical substances.
2. Open the eyelids immediately and wash the injured eye with running warm water for 10 minutes.
3. Take caution when washing. Do not allow the water containing pollutants to come in contact with the injured eye.
4. If irritation persists, seek medical attention immediately.

##### **After swallowing:**

1. If the victim is losing consciousness, is unconscious or is having convulsion, do not feed anything through the mouth.
2. Use water to rinse the mouth thoroughly.
3. Do not induce vomiting.
4. Give 240~300 ml of water to the victim.
5. If the victim vomits spontaneously, allow the victim to rinse the mouth and provide water repeatedly.
6. If breathing has stopped, apply artificial respiration by trained professionals immediately. If the heart has stopped, apply cardiopulmonary resuscitation.

**4.2 Major Disease and Harm Effects:** Serious exposure will cause disruption of the central nervous system inhibition such as short of breath, headache, fatigue, and dizziness.



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### SECTION 5: Firefighting Measures

#### 5.1 Suitable Extinguishing Agents:

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### 5.2 Special Exposure Hazards:

1. Static sparks with sufficient energy may ignite the vapor at the concentration within the explosive range.
2. Vapor is heavier than air and may travel to far places and flashback from ignition sources.
3. The sealed container may rupture when heated.
4. The concentrated aqueous solution is flammable.

#### 5.3 Special Extinguishing Procedure:

1. Retreat and extinguish the fire from a safe distance or a protected area.
2. Stay upwind to keep away from hazardous vapor and toxic decomposition.
3. Any leakage should be stopped before extinguishing the fire. If the leakage cannot be stopped and there is no immediate danger in the surrounding area, allow it to burn away. If the leakage is not stopped before extinguishing the fire, the vapor and the air will form an explosive mixture and ignite afterwards.
4. Separate materials that are not on fire and protect the personnel.
5. Move the container away from the fire field under safe conditions.
6. Use water mist to cool the tanks or containers in exposed the fire field.
7. The use of water mist to extinguish fire may be ineffective unless executed by fire fighters trained for extinguishing flammable liquids.
8. If the leakage is not ignited, spray water mist to disperse vapor and protect the personnel who try to stop the leakage.
9. A water spout is ineffective for extinguishing the fire.
10. For a big fire in a large area, use the unmanned water mist stand or the automatic water fire monitor.
11. Retreat from the fire field and allow the fire to burn out.
12. Stay away from the tanks.
13. When the safety valve alarm of the tank sounds or the color changes due to fire, retreat immediately.
14. Personnel without special protective equipment should not enter the fire field.

**5.4 Special Protection Equipment:** Fire fighters must wear air respirators, protective gloves, and firefighting coats.

### SECTION 6: Accidental Release Measures

#### 6.1 Personal Protection:

1. Before the polluted area is cleaned up completely, access to the area should be restricted.
2. Make sure the cleaning work is performed by trained personnel.
3. The personnel should wear appropriate personal protective equipment.

#### 6.2 Environmental Protection:

1. The air in the area should be well ventilated.
2. All flammable sources should be extinguished or eliminated.
3. Report the accident to the safety, health, and environmental protection authorities of the government.

#### 6.3 Methods for Cleaning Up:

1. Do not come in contact with the released chemical.
2. Avoid the released chemical from entering the sewers, drains, or sealed spaces.
3. Stop or reduce the leakage under safe conditions if possible.
4. Use sand, earth, or other absorbents that do not react with the released chemical to block the leakage.
5. Small Quantity: Use an absorbent that does not react with the released chemical to absorb. The polluted absorbent becomes as harmful as the released chemical and should be placed in the appropriate container that is capped and labeled. Use water to clean up the leakage area. The small release may be diluted with a large quantity of water.
6. Large Quantity: Contact the firefighting department, emergency response department, and the supplier for assistance.



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### SECTION 7: Handling and Storage

#### 7.1 Handling Precautions:

1. This substance is a highly flammable and toxic liquid. Therefore, personal protective equipment should be utilized during disposal while the engineer control is operational. The staff should receive relevant trainings on the risk and safe handling of this substance.
2. All flammable sources should be removed and kept away from heat and incompatible substances.
3. The "Smoking Prohibited" sign should be present in the work area.
4. The liquid will accumulate an electric charge. Therefore, a design to increase the conductivity should be taken into consideration. For example, all tanks, transfer containers, and lines should be grounded. Any naked metal should be connected for grounding. During the operation, the flow rate should be reduced to increase the operation time, the duration of the liquid retained in the lines should be increased, and the operation should be performed under low temperature.
5. When the operation is not conducted in the sealed system, the connections between the operation container and the receiving transmission equipment should be at the equivalent electric potential.
6. The empty tanks, containers, and lines may contain harmful residues. Therefore, there should be no welding, cutting, drilling, or heating before they are cleaned.
7. The tanks or containers may be filled with inert gas to reduce the risk of fire and explosion.
8. The ventilation system or equipment that does not produce sparks used in the work area should be explosion-proof.
9. The aisles and exits should be free from obstruction.
10. The installation of the system for detecting leakage and fire, the appropriate fire-fighting system, or emergency operation equipment in the storage area and large quantity operation area should be taken into consideration.
11. The formation of mist or vapor during the operation should be avoided. The operation should be conducted in a well-ventilated area in the smallest quantity possible. The operation area should be separated from the storage area.
12. Wear appropriate personal protective equipment when necessary to avoid contact with this chemical substance or the polluted equipment.
13. Do not use with incompatible chemicals (such as strong oxidants) in order to decrease the risks of fire and explosion.
14. Use containers made from compatible materials. Do not spill during dispensing.
15. Do not use air or inert gas to pressurize the liquid for the transport out of the container.
16. Unless the area is isolated with a fire-resistant structure, do not conduct the handling operation in the storage area.
17. Use a certified flammable liquid storage container and handling equipment.
18. Do not pour polluted liquid back to the original container.
19. The containers should be labeled clearly. Keep the container fastened to avoid damage when not in use.

#### 7.2 Storage Precautions:

1. The chemical should be stored in cool, dry, and well-ventilated area away from direct sunlight. Keep away from heat sources, flammable sources, and incompatibles.
2. Storage equipment should be constructed with fire-resistant materials.
3. The floor should be constructed with impermeable material to avoid absorption by the floor.
4. Set up slopes, doorsills or furrows at doorways so that leaking substances are discharged to a safe place.
5. The storage area should have clear signs and be free from impediments. Only designated or trained personnel are allowed to enter.
6. The storage area and the work area should be separated. The chemical should be stored away from lifts, buildings, room entrances, or major accesses.



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7. Appropriate fire extinguishers and leak clean-up equipment should be available near the storage area.
8. Containers should be checked for damages or leakage regularly.
9. All new containers should be checked for the appropriate labels and any damage.
10. The quantity of chemical to be stored should be limited.
11. The containers made from compatible materials should be used to store the released chemical.
12. The storage tanks should be grounded and connected to other equipment at equivalent electric potential.
13. Tanks used for storing inflammable liquids must be installed with relief valve and vacuum relief valve.
14. The chemical should be stored at the temperature suggested by the chemical manufacturer or supplier. If necessary, the temperature detection alarm should be installed to alert if the temperature is too high or too low.
15. The storage of large quantities should be avoided. The chemical should be stored in the isolated fireproof building.
16. The exhaust pipes of tanks should be installed with flame arresters.
17. The storage tanks should be built on the ground level with the entire bottom sealed to prevent leakage. The liquid control dam able to hold the entire volume should be present in the surrounding area

### **SECTION 8: Exposure Controls/Personal Protection**

#### **8.1 Engineering Control Parameters:**

**Product: 141-78-6 Ethyl Acetate**

WEL Short-term value: 400 ppm

Long-term value: 200 ppm

#### **8.2 Exposure controls**

##### **Personal protective equipment:**

1. A one-piece protective rubber clothing, work boots and safety showers:

##### **General protective and hygienic measures:**

1. Keep away from foodstuffs, beverages and food.
2. Immediately remove all soiled and contaminated clothing
3. Wash hands before breaks and at the end of work.
4. Avoid contact with the Eyes and Skin

##### **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protective device.

##### **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves:** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material:** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles





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### SECTION 9: Physical and Chemical Properties

<b>9.1 Information on basic physical and chemical properties</b> <b>General Information</b> <b>Appearance:</b> <b>Form:</b> <b>Color:</b> <b>Odor:</b> <b>Odor Threshold:</b>	Fluid Colourless Fruit-like Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b> <b>Melting point/Melting range:</b> <b>Boiling point/Boiling range:</b>	-83.57 °C 77-78 °C
<b>Flash point:</b>	-1 °C
<b>Flammability (solid, gaseous):</b>	Not applicable.
<b>Ignition temperature:</b>	460 °C
<b>Decomposition temperature:</b>	Not determined.
<b>Self-igniting:</b>	Not determined.
<b>Danger of explosion:</b>	Explosive with or without contact with air.
<b>Explosion limits:</b> <b>Lower:</b> <b>Upper:</b>	2.1 Vol % 11.5 Vol %
<b>Vapor pressure at 20 °C:</b>	97 hPa
<b>Density at 20 °C:</b> <b>Relative density</b> <b>Vapor density</b> <b>Evaporation rate</b>	0.9 g/cm <sup>3</sup> Not determined. Not determined. Not determined.
<b>Solubility in / Miscibility with water at 20 °C:</b>	
<b>Partition coefficient (N-Octanol / Water):</b> Not determined.	79 g/l
<b>Viscosity:</b> <b>Dynamic at 20 °C:</b> <b>Kinematic:</b>	0.44 mPas Not determined.
<b>9.2 Other information</b>	No further relevant information available.



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### SECTION 10: Stability and Reactivity

**10.1 Chemical Stability:** Stable under normal conditions

**10.2 Special Conditions of Hazardous Reaction:**

1. Strong oxidants (nitrate, perchlorate): increased risks of fire and explosion
2. Strong acids (Sulfuric acid, Fuming sulfuric acid, Chlorosulfonic acid): Decomposition reaction to release heat
3. Potassium t-butoxide: Flammable.
4. Lithium aluminum hydride, 2-chloro methyl furan: Explosive

**10.3 Conditions to Avoid:** Sparks, static electricity, fire source, moisture

### SECTION 11: Toxicological Information

**11.1 Exposure route:** Inhalation, skin contact, eye contact, ingestion

**11.2 Symptoms:** Irritation, headache, dizziness, sensation of intoxication, dry skin

**11.3 Acute Toxicity:**

1. **Skin: NO REACTION:** Based on available data, the classification criteria are not met.
2. **Serious eye damage /irritation:** Causes serious eye irritation.
3. **Inhalation:** Vapor irritating to nose, gums, and pharynx
4. **Ingestion:** Nausea, vomiting, short of breath, headache, drowsiness, dizziness, and other symptoms of the central nervous system problems

**11.4 Chronic Toxicity:**

1. Chronic exposure at the concentration of 4,200~13,900 ppm will cause slight irritation to the eyes.
2. 10% solution does not cause skin irritation to the general public, but will to hyper-allergenic people.
3. Ethyl acetate causes chronic injury to mammals

### SECTION 12: Ecological Information

**12.1 Eco-toxicity:** 1. LC50 (Fish)  
2. EC50 (aquatic invertebrates)

**12.2 Durability and Degradability:**

1. Ethyl acetate is fairly easy to be decomposed biologically.
2. Mainly evaporates when released to water.  
Half-life (air): 35.3~353 hr  
Half-life (water surface): 24~168 hr  
Half-life (underground water): 24~168 hr  
Half-life (soil): 24~168 hr

**12.3 Biological Accumulation:**

Evaporation or dissolution in ground water when ethyl acetate is released on the ground



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**SECTION 13: Disposal Considerations**

**13.1 Disposal Information:**

1. Related regulations of the government.
2. Waste to be disposed of according to the warehouse storage conditions.
3. Designated incineration or sanitary landfills.

**SECTION 14: Transport Information**

<b>14.1 UN-Number ADR, IMDG, IATA</b>	UN1173
<b>14.2 UN proper shipping name ADR IMDG, IATA</b>	1173 ETHYL ACETATE ETHYL ACETATE
<b>14.3 Transport hazard class(es) ADR, IMDG, IATA</b> 	
<b>Class Label</b>	Flammable liquids. 3
<b>14.4 Packing group ADR, IMDG, IATA</b>	II
<b>14.5 Environmental hazards: Marine pollutant:</b>	No
<b>14.6 Special precautions for user Danger code (Kemler): EMS Number:</b>	Warning: Flammable liquids. 33 3-07
<b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>Transport/Additional information:</b>	
<b>ADR Limited quantities (LQ) Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<b>Transport category Tunnel restriction code</b>	2 D/E
<b>IMDG Limited quantities (LQ) Excepted quantities (EQ)</b>	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<b>UN "Model Regulation":</b>	UN 1173 ETHYL ACETATE, 3, II



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**SECTION 15: Regulatory Information**

**15.1 Apply Regulation:**

1. Enforcement Rules of the Labor Safety and Health Act
2. Regulations of Hazard Communication on Dangerous and Harmful Material
3. Ordinance on Prevention of Organic Solvent Poisoning
4. Standards of Tolerable Hazardous Substance Concentration in the Air of Labor Working Environment
5. Traffic Safety Regulations
6. Standards for the Storage, Clearance, and Disposal of Industrial Waste
7. Public Hazardous Materials and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations

**SECTION 16: Other Information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any Specific product features and shall not establish a legally valid contractual relationship.

**Contact:**

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