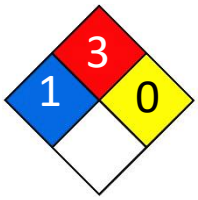
Material Safety Data Sheets



Revision 2

1. IDENTIFICATION

Product Name	**Ethyl Acetate**
Other Names	Acetic Acid, Ethyl Ester; Ethyl Ethanoate; Vinegar Naphtha
Code No	100-EA-2
Uses	Industrial Solvent.
Chemical Family	No Data Available
Chemical Formula	$C_4H_8O_2$
Chemical Name	Ethyl Acetate
Product Description	No Data Available
Company	Arman sina.co
Contact Information	info@armansina.com www.armansina.com

2. HAZARD IDENTIFICATION

Hazard Categories	Flammable Liquids
	Harmful
Hazard Statements	Highly flammable liquid and vapour.
	Causes serious eye irritation.
	May cause drowsiness or dizziness.
	Repeated exposure may cause skin dryness or cracking
Precautionary Statements	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
	Keep container tightly closed.
	Ground/bond container and receiving equipment.
	Use explosion-proof electrical/ventilating/lighting/equipment.
	Use only non-sparking tools.

Symbol

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ethyl Acetate	$C_4H_8O_2$	141-78-6	100.0 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	**Do Not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.**
Eye	**Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician**
Skin	**Flush area with large amounts of water and wash area with soap if available. Remove contaminated clothing, including shoes, and launder before reuse. Seek medical attention for skin irritations.**
Inhaled	**Using proper respiratory protection, immediately remove the affective victim from exposure. Administer artificial respiration respiration if breathing has stopped. Keep at rest. Seek immediate medical attention.**
Advice to Doctor	**Treat symptomatically based on judgement of doctor and individual reactions of patient.Avoid gastric lavage - aspiration of product to the lungs may result in chemical pneumonitis.**
Medical Conditions Aggravated by Exposure	**Persons with pre-exisiting skin or respiratory conditions should avoid unnecessary exposure to this product. Every effort to protect eyes, respiratory tract and skin exposure should be taken in these circumstances. Other Health Effects Information: Symptoms of exposure include coughing, shortness of breath, and dizziness.**

5. FIRE FIGHTING MEASURES

Flammability Conditions	**Product is a highly flammable liquid.**
Extinguishing Media	**Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.**
Hazardous Products of Combustion	**Flammable liquid. This product will fuel a fire in progress. Incompatible with Strong oxidising agents such as hydrogen peroxide, nitric acid, perchloric acid, chromium trioxide and sources of ignition. Hazardous decomposition products include Carbon dioxide, carbon monoxide and organic complexes on incomplete burning/oxidation.**
Personal Protective Equipment	**Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.**
Flash Point	
Lower Explosion Limit	**2.0 %**
Upper Explosion Limit	**9.0 %**
Auto Ignition Temperature	
Hazchem Code	**YE**

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	**Shut off all possible sources of ignition. Personnel involved in the clean up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Warn occupants of downwind areas of possible fire and explosion hazard, where present. Keep the public away from the area. Take measures to minimise the effect on the ground water.**
Clean Up Procedures	**Soak up spilled product using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. When saturated collect material, transfer to suitable, labelled, dry chemical-waste containers and dispose of promptly as hazardous waste. Recover by pumping. Use explosion proof pump or hand pump. In case of major water spill, Confine the spill if possible. Remove the product from the surface by skimming or with suitable absorbent material.**
Environmental Precautionary Measures	**Prevent further leakage or spillage if safe to do so. Do not let product enter drains.**
Personal Precautionary Measures	**Use personal protective equipment. Avoid breathing vapors,mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.Beware of vapours accumulating to form explosive conncentrations. Vapours can accumulate in low areas.**

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Remove contaminated clothing and wash before reuse. This product is flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Use grounding leads to avoid discharge (electrical spark). Do not pressurise, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel a fire in progress. Laboratory samples should be handled in a fume hood.
Storage	Store in a cool, dry, well-ventilated, fire-proof area. Keep containers tightly sealed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Ground and bond storage containers. Store away from incompatible materials as listed in section 10. Protect from direct sunlight. This product has a UN classification of 1173 and a Dangerous Goods Class 3 (flammable) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.
Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Incompatible materials: Natural Rubber, Butyl Rubber, EPDM, Polystyrene

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); Ethyl Acetate CAS 141-78-6: TWA = 200ppm (720mg/m3) STEL = 400ppm (1440mg/m3) NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use explosion proof equipment.
Personal Protection Equipment	RESPIRATOR: Wear a respirator with suitable Type 'A' filter for organic gases and vapours if engineering controls are inadequate (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Chemical-resistant gloves (AS2161). CLOTHING: Chemical-resistant coveralls and safety footwear (AS3765/2210).
Work Hygienic Practices	No Data Available

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Mobile Liquid
Odour	No Data Available
Colour	Clear, Colourless
pH	No Data Available
Vapour Pressure	97 hpa
Relative Vapour Density	No Data Available
Boiling Point	77ºC
Melting Point	-83ºC
Freezing Point	No Data Available
Solubility	No Data Available
Specific Gravity	0.90
Flash Point	-4ºC

Auto Ignition Temp	**No Data Available**
Evaporation Rate	**No Data Available**
Bulk Density	**No Data Available**
Corrosion Rate	**No Data Available**
Decomposition Temperature	**No Data Available**
Density	**No Data Available**
Specific Heat	**No Data Available**
Molecular Weight	**No Data Available**
Net Propellant Weight	**No Data Available**
Octanol Water Coefficient	**No Data Available**
Particle Size	**No Data Available**
Partition Coefficient	**No Data Available**
Saturated Vapour Concentration	**No Data Available**
Vapour Temperature	**No Data Available**
Viscosity	**No Data Available**
Volatile Percent	**100% v/v**
VOC Volume	**No Data Available**
Additional Characteristics	**No Data Available**
Potential for Dust Explosion	**Product is a liquid**
Fast or Intensely Burning Characteristics	**No Data Available**
Flame Propagation or Burning Rate of Solid Materials	**No Data Available**
Non-Flammables That Could Contribute Unusual Hazards to a Fire	**No Data Available**
Properties That May Initiate or Contribute to Fire Intensity	**No Data Available**
Reactions That Release Gases or Vapours	**No Data Available**
Release of Invisible Flammable Vapours and Gases	**No Data Available**

10. STABILITY AND REACTIVITY

Chemical Stability	**Product is stable under directed conditions of use, storage and temperature.** **Flammable liquid.**
Conditions to Avoid	**Avoid Excessive heat, direct sunlight, moisture, mineral acids, strong oxidisers, halogenated compounds.**
Materials to Avoid	**Incompatible with Strong oxidising agents such as hydrogen peroxide, nitric acid, perchloric acid, chromium trioxide and sources of ignition.**
Hazardous Decomposition Products	**Hazardous decomposition products include Carbon dioxide, carbon monoxide and organic complexes on incomplete burning/oxidation.**
Hazardous Polymerisation	**Hazardous polymerization will not occur.**

11. TOXICOLOGICAL INFORMATION

General Information	**LD50 (Oral , rat) 5620 mg/kg;** **LD50 (Dermal, rabbit) > 180000 mg/kg** **LC50 (Inhalation , mouse ,2 h) 45 mg/L**
EyeIrritant	**Vapour and liquid are irritants. Symptoms include redness, swelling and temporary corneal damage.**
Ingestion	**Swallowing will result in nausea, vomiting, shortness of breath, headache, drowsiness, and dizziness, and loss of consciousness and possible death.**
Inhalation	**Vapour will be irritating to the mucose membranes and respiratory tract.** **Inhalation of high concentrations can produce central nervous system depression including impaired judgement, loss of coorindation, dizziness, nausea, and if exposure is prolonged, loss of consciousness.**

SkinIrritant	Contact with skin may result in irritation. Will have a degreasing action on the skin, possibly resulting in irritant contact dermatitis.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	LC50(Oncorhynchus mykiss,96h) 350-600mg/L EC50(Daphnia magna,48h) 560mg/L
Persistence/Degradability	Log P: 0.73
Mobility	ThOD: 1.82
Environmental Fate	Do NOT let product reach waterways, drains and sewers.
Bioaccumulation Potential	No information available on bioaccumulation for this product. BCF: 13500 (experimental)
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local regulations. All empty packaging should be disposed of in accordance with Local Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice. Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Packaging may still contain product residue that may be harmful. Ensure that empty packaging is managed in accordance with Dangerous Goods regulations.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	ETHYL ACETATE
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
ERG	129 Flammable Liquids (Polar / Water-Miscible / Noxious)
UN Number	1173
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG

Proper Shipping Name	ETHYL ACETATE
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1173
Hazchem	3YE
Pack Group	II
Special Provision	No Data Available
EMS	FE,SD
Marine Pollutant	No

Air Transport
IATA

Proper Shipping Name	**ETHYL ACETATE**
Class	**3 Flammable Liquids**
Subsidiary Risk(s)	**No Data Available**
UN Number	**1173**
Hazchem	**3YE**
Pack Group	**II**
Special Provision	**No Data Available**

15. OTHER INFORMATION

Revision	**2**
Key/Legend	**< Less Than** **> Greater Than** **atm Atmosphere** **CAS Chemical Abstracts Service (Registry Number)** **cm Square Centimetres** **CO2 Carbon Dioxide** **COD Chemical Oxygen Demand** **Degrees Celcius** **Degrees Farenheit** **g Grams** **g/cm Grams per Cubic Centimetre** **g/l Grams per Litre** **HSNO Hazardous Substance and New Organism** **IDLH Immediately Dangerous to Life and Health** **immiscible Liquids are insoluable in each other.** **inHg Inch of Mercury** **inH2O Inch of Water** **K Kelvin** **kg Kilogram** **kg/m Kilograms per Cubic Metre** **lb Pound** **LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.** **LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.** **ltr or L Litre** **m Cubic Metre** **mbar Millibar** **mg Milligram** **mg/24H Milligrams per 24 Hours** **mg/kg Milligrams per Kilogram** **mg/m Milligrams per Cubic Metre** **Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.** **mm Millimetre** **mmH2O Millimetres of Water** **mPa.s Millipascals per Second** **N/A Not Applicable** **NIOSH National Institute for Occupational Safety and Health** **NOHSC National Occupational Heath and Safety Commission** **OECD Organisation for Economic Co-operation and Development** **Oz Ounce** **PEL Permissible Exposure Limit** **Pa Pascal** **ppb Parts per Billion** **ppm Parts per Million** **ppm/2h Parts per Million per 2 Hours** **ppm/6h Parts per Million per 6 Hours** **psi Pounds per Square Inch** **R Rankine** **RCP Reciprocal Calculation Procedure** **STEL Short Term Exposure Limit** **TLV Threshold Limit Value** **tne Tonne** **TWA Time Weighted Average** **ug/24H Micrograms per 24 Hours** **UN United Nations** **wt Weight**