Material Safety Data Sheet
Ethyl Acetate, P.A.

ACC# 96072

Section 1 - Chemical Product and Company Identification

MSDS Name: Ethyl Acetate, P.A.
Catalog Numbers: AC232110000, AC232110010, AC232110025
Synonyms: Acetic Acid Ethyl Ester; Acetic Ether; Acetidin; Acetoxyethane; Ethyl Acetic Ester; Ethyl Ethanoate.
Company Identification:

Acros Organics N.V.
One Reagent Lane
Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01
For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
141-78-6	Ethyl acetate	>99%	205-500-4

Hazard Symbols: XI F
Risk Phrases: 11 36 66 67

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 24 deg F. May cause respiratory tract irritation. May be harmful if inhaled. May cause central nervous system depression. May cause digestive tract irritation. **Warning! Flammable liquid and vapor.** Causes eye irritation. May cause skin irritation. May cause liver and kidney damage.
Target Organs: Kidneys, central nervous system, liver.

Potential Health Effects

Eye: Causes eye irritation. Vapors may cause eye irritation.
Skin: May cause skin irritation. Repeated or prolonged exposure may cause drying and cracking of the skin.
Ingestion: May cause irritation of the digestive tract. May cause liver and kidney damage. Ingestion of large amounts may cause central nervous depression. May cause headache, nausea, fatigue, and dizziness.
Inhalation: May cause respiratory tract irritation. May be harmful if inhaled. Inhalation of high concentrations may cause narcotic effects.
Chronic: Chronic inhalation may cause effects similar to those of acute inhalation. Chronic exposure may produce anemia, leukocytosis, cloudy swelling, and fatty degeneration of the viscera.

Section 4 - First Aid Measures

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.
Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.
Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Containers may explode in the heat of a fire. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
Extinguishing Media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Water may be ineffective. For large fires, use water spray, fog or alcohol-resistant foam. Do NOT use straight streams of water. Cool containers with flooding quantities of water until well after fire is out. DO NOT USE DRY CHEMICAL for fires involving nitromethane or nitroethanes.
Flash Point: 24e deg F (-4.44 deg C)
Autoignition Temperature: 800 deg F (426.67 deg C)
Explosion Limits, Lower:2.2
Upper: 9.0
NFPA Rating: (estimated) Health: 1; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as saw dust. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.
Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.
Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ethyl acetate	400 ppm TWA	400 ppm TWA; 1400 mg/m3 TWA 2000 ppm IDLH	400 ppm TWA; 1400 mg/m3 TWA

OSHA Vacated PELs: Ethyl acetate: 400 ppm TWA; 1400 mg/m3 TWA
Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear, colorless
Odor: sweet, fruity odor
pH: Not available.
Vapor Pressure: 100 mm Hg @27C
Vapor Density: 3.0 (Air=1)
Evaporation Rate:6.0 (Butyl acetate=1)
Viscosity: Not available.
Boiling Point: 77 deg C
Freezing/Melting Point:-83 deg C
Decomposition Temperature: Not available.
Solubility: Moderately soluble in water.
Specific Gravity/Density:0.9 (Water=1)
Molecular Formula:C4H8O2
Molecular Weight:88.0548

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: High temperatures, incompatible materials, ignition sources, excess heat.
Incompatibilities with Other Materials: Chlorosulfonic acid, lithium aluminum hydride + 2-chloromethylfuran, lithium tetrahydroaluminate, oleum, potassium t-butoxide. Substance coming in contact with nitrates or strong acids/oxidizers/alkalies may cause fire.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 141-78-6: AH5425000
LD50/LC50:
CAS# 141-78-6:
Inhalation, mouse: LC50 = 45 gm/m3/2H;
Inhalation, rat: LC50 = 200 gm/m3;
Oral, mouse: LD50 = 4100 mg/kg;
Oral, rabbit: LD50 = 4935 mg/kg;
Oral, rat: LD50 = 5620 mg/kg;

Skin, rabbit: LD50 = >20 mL/kg;

Carcinogenicity:
CAS# 141-78-6: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: Cytogenetic Analysis: hamster fibroblast 9g/L Sex Chromosome Loss/Non-disjunction: S. cerevisiae 24400 ppm.
Other Studies: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: 230mg/L; 96H; Daphnid LC50=2500 mg/L/96H Golden orfe LC50=270 mg/L/48H
Environmental: Terrestrial: Expected to have high mobility in soil. Volatilization of ethyl acetate from moist soil surfaces is expected to be important. Aquatic: Not expected to adsorb to suspended solids and sediment in water. Atmospheric: Expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase ethyl acetate is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 10 days.
Physical: Substance biodegrades at a high rate with little bioconcentration.
Other: For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: CAS# 141-78-6: waste number U112 (Ignitable waste).

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	ETHYL ACETATE				No information available.
Hazard Class:	3				
UN Number:	UN1173				
Packing Group:	II				

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 141-78-6 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
CAS# 141-78-6: 4/12b
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA

CERCLA Hazardous Substances and corresponding RQs
CAS# 141-78-6: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 141-78-6: flammable.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 141-78-6 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols:
XI F
Risk Phrases:
R 11 Highly flammable.
R 36 Irritating to eyes.
R 66 Repeated exposure may cause skin dryness or cracking.
R 67 Vapors may cause drowsiness and dizziness.

Safety Phrases:
S 16 Keep away from sources of ignition - No smoking.
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 33 Take precautionary measures against static discharges.

WGK (Water Danger/Protection)
CAS# 141-78-6: 1
Canada - DSL/NDSL
CAS# 141-78-6 is listed on Canada's DSL List.
Canada - WHMIS
This product has a WHMIS classification of B2, D2B.
Canadian Ingredient Disclosure List
CAS# 141-78-6 is listed on the Canadian Ingredient Disclosure List.
Exposure Limits
CAS# 141-78-6: OEL-AUSTRALIA:TWA 400 ppm (1400 mg/m3) OEL-BELGIUM:TWA 400 ppm (1440 mg/m3) OEL-CZECHOSLOVAKIA:TWA 400 mg/m3;STEL 2000 mg/m3 OEL-DENMARK:TWA 300 ppm (1100 mg/m3) OEL-FINLAND:TWA 300 ppm (1100 mg/m3);STEL 500 ppm (1800 mg/m3) OEL-FRANCE:TWA 400 ppm (1400 mg/m3) OEL-GERMANY:TWA 400 ppm (1400 mg/m3) OEL-HUNGARY:TWA 400 mg/m3;STEL 1200 mg/m3 OEL-JAPAN:TWA 400 ppm (1400 mg/m3) OEL-THE NETHERLANDS:TWA 400 ppm (1400 mg/m3) JAN9 OEL-THE PHILIPPINES:TWA 400 ppm (1400 mg/m3) JAN9 OEL-POLAND:TWA 200 ppm OEL-RUSSIA:TWA 400 ppm;STEL 200 mg/m3 OEL-SWEDEN:TWA 150 ppm (500 mg/m3);STEL 300 ppm (1100 mg/m3) OEL-SWITZERLAND:TWA 400 ppm (1400 mg/m3);STEL 800 ppm OEL-TURKEY:TWA 400 ppm (1400 mg/m3) OEL-UNITED KINGDOM:TWA 400 ppm (1400 mg/m3) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information

MSDS Creation Date: 12/11/1997
Revision #5 Date: 5/14/2002