

## Material Safety Data Sheet

Revision Issued: 2/25/2011 Supercedes: 7/24/2007 First Issued: 6/30/1987

### Section I - Chemical Product And Company Identification

**Product Name: Ethyl Acetate**

CAS Number: 141-78-6

HBCC MSDS No. CE02100



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### Section II - Composition/Information On Ingredients

		Exposure Limits (TWAs) in Air			
Chemical Name	CAS Number	%	ACGIH TLV	OSHA PEL	STEL
Ethyl Acetate	141-78-6	99	400 ppm	400 ppm	N/A
Ethanol	64-17-5	1	1000 ppm	1000 ppm	N/A

### Section III - Hazard Identification

**Routes of Exposure:** Ethyl acetate may affect the body either through ingestion, inhalation, or contact with the eyes and/or skin.

**Summary of Acute Health Hazards**

**Ingestion:** May cause severe gastrointestinal irritation. Symptoms may include nausea, vomiting and diarrhea.

**Inhalation:** Inhalation can cause severe irritation of mucous membranes and upper respiratory tract. Vapors may be irritating to the eyes, nose, and throat. High concentrations in air may cause narcosis, may cause liver and kidney damage, and central nervous system depression with symptoms including weakness, coughing, wheezing, laryngitis, shortness of breath, drowsiness, headache, dizziness, nausea, unconsciousness, and possibly death. Severe acute exposures may result in pulmonary edema with hemorrhage and hyperemia of the respiratory tract.

**Skin:** Prolonged or repeated contact may cause drying, cracking, or irritation of the skin.

**Eyes:** Contact with the eyes may result in painful but temporary irritation.

**Summary of Chronic Health Hazards:** Although no chronic systemic effects have been reported in humans, ethyl acetate is a defatting agent, and prolonged exposure may cause dermatitis.

**Signs and Symptoms of Exposure:** Headache, irritation of respiratory passages and eyes, dizziness and nausea, weakness, loss of consciousness.

**Effects of Overexposure:** Painful conjunctival irritation may occur from splashes in the eye. Breathing difficulties, dizziness, lightheadedness, weakness, drowsiness and unconsciousness may result from overexposure.

**Medical Conditions Generally Aggravated by Exposure:** N/A

**Note to Physicians:** N/A

#### Section IV - First Aid Measures

**Ingestion:** When ethyl acetate has been swallowed, GET MEDICAL ATTENTION IMMEDIATELY. If medical attention is not immediately available, get the afflicted person to vomit by having him touch the back of his throat with his finger or by giving him syrup of ipecac as directed on the package. Do not make an unconscious person vomit.

**Inhalation:** Move the exposed person to fresh air at once. If breathing stops, begin artificial respiration. Keep the affected person warm and at rest. GET MEDICAL ATTENTION IMMEDIATELY. (Caution: Administration of mouth-to-mouth resuscitation may expose the first aid provider to the chemical within the victim's lungs or vomit.)

**Skin:** Promptly flush the contaminated skin with water. If ethyl acetate soaks through the clothing, remove the clothing immediately and flush the skin with water. If there is skin irritation, GET MEDICAL ATTENTION.

**Eyes:** Flush with large quantities of water, lifting the lower and upper lids occasionally, for at least 15 minutes. GET MEDICAL ATTENTION as soon as possible. Contact lenses should not be worn when working with this chemical.

#### Section V - Fire Fighting Measures

**Flash Point:** (24°F) -4°C CC

**Autoignition Temperature:** 800°F (426°C)

**Lower Explosive Limit:** 2% by volume in air

**Upper Explosive Limit:** 11.5% by volume in air

**Unusual Fire and Explosion Hazards:** Flammable liquid. Vapors are heavier than air and may travel considerable distance to a source of ignition and flash back. Sealed containers may rupture when heated. Sensitive to static discharge.

**Extinguishing Media:** Alcohol foam, carbon dioxide, Dry chemical, or water spray (water may be ineffective).

**Special Firefighting Procedures:** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Water may be ineffective for fire fighting. Use water spray to keep fire-exposed containers cool. Water may be used to flush spills away from exposures and to dilute spills to non-flammable mixtures. Vapors can flow along surfaces to distant ignition source and flash back.

#### Section VI - Accidental Release Measures

Proceed with caution. Restrict access to area. Keep unprotected personnel upwind of spill area. Keep sources of ignition and hot metal surfaces isolated from the spill. Ventilate the area, and avoid breathing the vapors. Wear a MSHA/NIOSH-approved respirator suitable for the situation. Dike and contain the spill with inert material (e.g. sand, earth). Transfer the saturated diking material to containers for disposal. If possible, clean up the spill area on a dry basis and then flush with plenty of water. Dispose of flush solutions as above.

#### Section VII - Handling and Storage

Material is classified as a Flammable Liquid. Keep away from heat, sparks, and flames. Keep container closed. Store in a cool, dry, well-ventilated area.

**Other Precautions:** Personnel should avoid inhalation of vapors and personal contact with ethyl acetate.

#### Section VIII - Exposure Controls/Personal Protection

**Respiratory Protection:** Use only MSHA/NIOSH-approved respirators. See SUPPLEMENTAL INFORMATION.

**Respirator Selection: 1000 ppm: CCROVF 5000 ppm: GMOVc 10,000 ppm:**

GMOVfb/SAF/SCBAF **Escape:** GMOV/SCBA

**Ventilation:** General mechanical ventilation may be sufficient to keep product vapor concentrations within specified time-weighted TLV ranges (at least ten air changes per hour for good general room ventilation). If general ventilation proves inadequate to maintain safe vapor concentrations, supplemental local exhaust may be required.

**Protective Clothing:** Clothing should prevent repeated or prolonged skin contact with the product. This may include rubber boots, gloves, and other impervious and resistant clothing. Compatible substances may include butyl rubber, chlorinated polyethylene, polyurethane, polyvinyl alcohol, styrene-butadiene rubber, and nitrile-butadiene rubber.

**Eye Protection:** Wear safety glasses with side shields, chemical goggles and/or face shields.

**Other Protective Clothing or Equipment:** An eye wash and safety shower should be in close proximity.

**Work/Hygienic Practices:** All employees who handle this product should wash their hands before eating, smoking, or using toilet facilities. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible.

### Section IX - Physical and Chemical Properties

**Physical State:** Liquid

**pH:** N/A

**Melting Point/Range:** -83°C; -117°F

**Boiling Point/Range:** 77°C; 171°F

**Appearance/Color/Odor:** Clear liquid, with fruity odor.

**Solubility in Water:** 1ml/10ml water @ 25°C

**Vapor Pressure (mmHg):** 76 @ 20°C (68°F)

**Specific Gravity (Water=1):** 0.9

**Molecular Weight:** 88.11

**Vapor Density (Air=1):** 3.0

**% Volatiles:** > 99

**Evaporation Rate (BuAc=1):** 6

**How to detect this compound:** Charcoal adsorption, workup with CS<sub>2</sub>, analysis by gas chromatography.

### Section X - Stability and Reactivity

**Stability:** Stable under ordinary conditions of use and storage. Heat will contribute to instability. Slowly decomposed by moisture.

**Hazardous Polymerization:** Will Not Occur

**Conditions to Avoid:** Heat, fire, or sparks; contact with incompatible materials; runoff to sewers or water bodies; inhalation, ingestion, or physical contact. Will attack some forms of plastic, rubber, and coatings.

**Materials to Avoid:** Nitrates, strong oxidizers, strong alkalies, and strong acids.

**Hazardous Decomposition Products:** As with any other organic material, combustion will produce carbon dioxide and probably carbon monoxide.

### Section XI - Toxicological Information

Ethyl acetate vapor is irritating to the eyes and respiratory passages of man at concentrations above 400 ppm. In animals it has a narcotic effect at concentrations of over 5000 ppm. Due to its irritating properties, employees will not voluntarily remain in such high concentrations. Repeated exposures of rabbits to 4450 ppm for 1 hour daily for 40 days resulted in anemia with leukocytosis, and damage to liver and kidneys. Animals exposed to lethal concentrations died with pulmonary edema and hemorrhage. This substance is a defatting agent, and prolonged exposure may

cause irritation of the skin. Painful conjunctival irritation may occur from splashes in the eye. No chronic systemic effects have been reported in humans.

### Section XII - Ecological Information

When released into the soil, this material may leach into groundwater. When released into the soil, this material may evaporate to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released to water, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life of less than 1 day. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material may be moderately degraded by photolysis. When released into the air, this material is expected to have a half-life between 1 and 10 days.

#### Environmental Toxicity:

For Ethyl Acetate:

96 Hr LC50 Pimephales promelas: 230 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 484 mg/L [flow-through];  
48 Hr EC50 Daphnia magna (water flea): 717 mg/L;  
48 Hr EC50 Scenedesmus subspicatus (algae): 3300 mg/L:

Ethyl Acetate Microtox Data:

5 min EC50 Photobacterium phosphoreum: 1180 mg/L;  
15 min EC50 Photobacterium phosphoreum: 5870 mg/L;  
2 Hr EC50 Pseudomonas fluorescens: 7400 mg/L;  
15 min EC50 Pseudomonas fluorescens: 1500 mg/L

### Section XIII - Disposal Considerations

Material used, spent or spilled is considered a Hazardous Waste [EPA Hazardous Waste Number F003 (40 CFR 261.21)], therefore it is to be disposed of in accordance with federal, state, county and local regulations.

### Section XIV - Transport Information

**DOT Proper Shipping Name:** Ethyl Acetate  
**DOT Hazard Class/ I.D. No.:** 3, UN1173, II

### Section XV - Regulatory Information

**CERCLA Reportable Quantity:** 5000 Pounds (2270 Kilograms)  
**Immediately Dangerous to Life and Health (IDLH):** 2,000 ppm [LEL]  
**RCRA Code:** U112  
**Uniform Fire Code Rating:** Class IB Flammable Liquid  
**NFPA Rating:** Health - 1; Flammability - 3; Instability - 0  
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme  
**Carcinogenicity Lists:** No **NTP:** No **IARC Monograph:** No **OSHA Regulated:** Yes

### Section XVI - Other Information

**Synonyms/Common Names:** Acetic Ether, Acetic Ester, Vinegar Naphtha, Ethyl Ester

**Chemical Family/Type:** Oxygenated Hydrocarbon

**Sections Changed Since Last Revision:** III, XII

**IMPORTANT!** Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the

product to be sure that they are aware of the information before use or other exposure. This MSDS has been prepared according to the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The MSDS information is based on sources believed to be reliable. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control, **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. Also, additional information may be necessary or helpful for specific conditions and circumstances of use. It is the user's responsibility to determine the suitability of this product and to evaluate risks prior to use, and then to exercise appropriate precautions for protection of employees and others.