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To: Cell **9748**  
Company: NASCO  
Location: Atkinson  
Fax #: 414-563-8296 Telephone #

No. of Pages: 5 Today's Date: 5.19.93 Time  
From: TRAVIS  
Company: BioQuip Products  
Location: Gardena Dept. Charge  
Fax #: 310-324-7931 Telephone #: 310-539-2538

Comments: Copies of MSDS's on Napthalene + Ethyl Acetate  
Nasco Science/BioQuip


Ethyl Acetate #1185 Pg. 1

# Material Safety Data Sheet

## OIL AND SOLVENT PROCESS COMPANY

1704 W. First Street • P.O. Box 507 • Azusa, California 91702-0507 • (610) 334-5117  
9131 E. 86th Avenue • Henderson, Colorado 80640-8425  
P.O. Box 350 • Commerce City, Colorado 80007-0350 • (303) 289-4827

Date: July 22, 1986  Issued  Revised



### Section I-Product Identification

PRODUCT NAME: Ethyl Acetate, UN1173  
CHEMICAL SYNONYMS: Acetic Ethoxy Acetic Ether  
CHEMICAL FAMILY: Esters  
OSCO CODE: N-3006

THIS PRODUCT IS A  HAZARDOUS SUBSTANCE  HAZARDOUS MIXTURE

24 HR. EMERGENCY ASSISTANCE  
OSCO Denver (303) 289-1827  
OSCO Kansas (816) 334-5117  
Petroleum Center Center (319) 664-4151  
Petroleum Center Center (408) 352-2073  
Chandler (408) 414-3900

HAZARD RATING  
Vapor:  1  2  3  
Liquid:  1  2  3  
Solid:  1  2  3

### Section II-Hazardous Ingredients

NAME	CAS NUMBER	VOLUME %	PERCENTAGE BY WEIGHT	REMARKS
Ethyl Acetate	141-78-6	100	400	100

NOTE: NO HAZARD GOVERNMENT REGULATIONS ARE LISTED.

IF THIS PRODUCT IS A MIXTURE AND A TLV CAN BE CALCULATED, THE TLV IS: N/A P.A.M.

### Section III-Physical Properties

BOILING POINT °F	169	PH	Nearly Neutral	APPEARANCE, COLOR, ODO	Clear, colorless liq
VAPOR PRESSURE (mm Hg) @ 68°F	86	SPECIFIC GRAVITY (d <sub>4</sub> = 1)	0.901		Pleasant, Fruity odor
VAPOR DENSITY (air = 1)	3.04	PERCENT VOLATILE BY VOLUME (%)	100		
EQUILIBRIUM IN WATER (% BY WEIGHT)	7.4	EVAPORATION (N 50 Acc = 1)	4.1		

### Section IV-Fire Protection Information

FLASH POINT (Test Method)	24	Flammable Limits (by volume in air)	Lower Limit	Upper Limit
AUTOIGNITION TEMPERATURE °F	905	Extinguishing Media	Mechanical foam, Dry Chemical	

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing equipment should be used in confined areas where the solvent is stored. A straight water stream would spread hydrocarbon fires.

UNUSUAL FIRE OR EXPLOSIVE HAZARD: A vapor accumulation would flash and/or explode if ignited. Incomplete combustion will produce carbon monoxide and other toxic substances.

### Section V-Reactivity Data

STABILITY (Thermal, Light, etc.)	Stable	Conditions to Avoid	Open flames, hot surfaces, electrical arcs or any ignition source.
INCOMPATIBILITY (Hazardous to Avoid)	Strong Oxidizing Agents		
HAZARDOUS DECOMPOSITION PRODUCTS	Normal combustion forms carbon dioxide and water vapor; Incomplete combustion can produce carbon monoxide.		
HAZARDOUS POLYMERIZATION	May Occur	Will Not Occur	X
OTHER			

**Section VI-Environmental Protection**

PRECAUTIONS IF MATERIAL IS RELEASED OR SPILLED	Spills should be contained immediately. Large spills should be removed by vacuum truck. Smaller spills may be soaked up with absorbent materials, placed in closed containers, labeled, stored, and disposed of properly. Persons performing this work must wear adequate personal protective equipment and clothing.
RECYCLABLE SOLVENTS	PROTECT THE ENVIRONMENT, DO NOT WASTE THIS SOLVENT, IT IS RECYCLABLE. CALL OSCO (818) 334-5117 call (303) 289-4821 for Colorado and Western States other than California
DISPOSAL OF NON-RECYCLABLE SOLVENTS	This solvent is normally recyclable. If conditions prevent recycling, dispose of in accordance with all Federal, State, and Local Health and Pollution Regulations.

**Section VII-Handling and Storage Precautions**

PRODUCT LABEL	Read and observe all precautions on product label. Keep out of reach of children.
EMPTY CONTAINER	Since emptied containers retain product residues (vapor and liquid), all labeled hazardous precautions must be observed. Tighten bungs.
DIRTY SOLVENT	Store in accordance with all applicable regulations. Tighten bungs and store in a cool area.
OTHER	Handle waste solvent as hazardous waste. Collect into DOT approved type container. This waste could be scalding, solidified, incinerated. For more information consult CFR 40 or call OSCO.

**Section VIII-Special Protection Information**

EYE PROTECTION	Avoid eye contact with this material. Both Chemical safety goggles and a plastic face shield should be worn when there is danger of splashing. Spectacle-type glasses do not provide satisfactory protection.
RESPIRATORY PROTECTION	Whenever the vapor or mist concentration is greater than applicable standards, use an approved respirator for organic vapor and mist, or supplied air, or self-contained breathing equipment.
SKIN PROTECTION	Avoid prolonged or repeated skin contact with this material. Wear protective clothing and solvent-resistant gloves.
VENTILATION	Use adequate ventilation to keep the vapor or mist concentration of this material below applicable standards.
OTHER	

**Section IX-Special Precautions**

Dye bath and safety shower must be provided in all work areas where this solvent is used or handled.

AGGRAVATED MEDICAL CONDITIONS

Pre-existing eye, skin, central nervous system or respiratory disorders may be aggravated by exposure to this product.

**Section X-Emergency and First Aid Procedures**

EYE CONTACT	Immediately flush eyes with fresh water for at least 15 minutes. Get medical attention immediately.
SKIN CONTACT	Wash contaminated areas with soap and water. Remove contaminated clothing and footwear. Wash clothing before re-use. Discard footwear which cannot be decontaminated. Medical attention may be required.
INHALATION	Remove patient to fresh air. If breathing stops, give artificial respiration, preferably mouth-to-mouth. Oxygen may be used if available. Get medical attention immediately.
INGESTION	Get medical attention immediately.
OTHER	

**Section XI-Additional Information**

<p>3103247931</p> <p>BIOQUIP</p> <p>11:18</p> <p>19 93</p> <p>MAY</p>	
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**Section XII-Toxicity Information: (Including the Acute and Chronic Health Effects)**

REFER TO SECTION II FOR APPLICABLE THRESHOLD LIMIT VALUES (TLV) WHICH ARE THOSE ESTABLISHED BY THE AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS.

ACUTE HEALTH EFFECTS AND ROUTES OF POTENTIAL ENTRY, PLUS SYMPTOMS OF OVEREXPOSURE:

1. INHALATION: Irritation to the nose, throat and respiratory tract; Narcosis.

2. SKIN: Irritation.

3. EYES: Irritation.

4. INGESTION: Nausea, vomiting, unconsciousness.

**CHRONIC HEALTH EFFECTS:**

Dermatitis, possible damage to central nervous system.

**Section XIII-Shipping Information DOT/AQMD Rule 443**

ROPER SHIPPING NAME	Ethyl Acetate Flammable Liquid
DOT CLASSIFICATION	<input type="checkbox"/> PHOTOCHEMICALLY REACTIVE
DOT LABELS REQUIRED	<input type="checkbox"/> NON-PHOTOCHEMICALLY REACTIVE MORE THAN 4%
DOT LABELS REQUIRED	<input checked="" type="checkbox"/> NON-PHOTOCHEMICALLY REACTIVE LESS THAN 4%

Information appearing herein concerning our products is based upon tests and data believed to be reliable. However, the user's responsibility is determining the toxicity and suitability of the product for his own use. Since the actual use by others is beyond our control, we guarantee no liability for injury or damage by use of the product without reference to the information herein to be construed as a warranty, express or implied, or as a representation of any kind. The user is advised to read the entire MSDS and to follow the instructions and precautions therein. The user is advised to read the entire MSDS and to follow the instructions and precautions therein. The user is advised to read the entire MSDS and to follow the instructions and precautions therein.



Since 1935

We believe it is very important that our customers are aware of the requirements of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). Also the requirements of the California Hazardous Substances Information and Training Act as described in the Labor Code of California. Also California Administrative Code Title 8 Industrial Relations. The above regulations describe the responsibilities of purchasers of solvents. These responsibilities include making information available to anyone who might be exposed to the product. We urge our customers to utilize the information we are supplying to help them comply with the regulations and protect your employees and protect your company from potential liability claims. Note: We suggest that if you make copies of the MSDS for distribution that you make certain that a copy is retained in your files. Attention: Many liability claims have resulted from transferring material from a bulk tank or from a proprietary labeled drum into unlabeled or improperly labeled containers for in-plant use. To protect yourself you should make certain that any container containing a product is labeled in the same fashion as the drum shipped to you.

**For All Your Solvent Requirements, Including Recycling of Waste, Call OSCO.**

Rocky Mountain Division:  
 P.O. Box 360  
 Commerce City, CO 80003-0360  
 (303) 289-4827

Azusa Plant:  
 P.O. Box 907.PPP  
 Azusa, California 91702-0907  
 (818) 334-5117

72-62-7820-01

MATERIAL SAFETY DATA SHEET

Ashland Chemical Company

DIVISION OF ASHLAND OIL, INC.

P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 880-3333

24-HOUR EMERGENCY TELEPHONE (806) 334-1133



001009

NAPHTHALENE

Page: 1

THIS MSDS COMPLIES WITH 29 CFR 1910.1200 (THE HAZARD COMMUNICATION STANDARD)

Product Name: NAPHTHALENE
CAS NUMBER: 91-20-3

MILLERT HOME PRODUCTS
4044 PARK AVENUE
SAINT LOUIS MO 63110

05 59 008 9705800-

Data Sheet No: 0025240-004
Prepared: 12/22/88
Supersedes: 04/06/88

PRODUCT: 418505
INVOICE: 037270
INVOICE DATE: 01/09/89
TO: KENOVA CHEMICAL COMPANY
21ST AND BEECH STREETS
KENOVA, WV 25530

ATTN: PLANT MGR./SAFETY DIR.

SECTION II PRODUCT IDENTIFICATION

General or Generic ID: HYDROCARBON

DOT Hazard Classification: ORM-A

SECTION III COMPONENTS

IF PRESENT, IARC, NTP AND OSHA CARCINOGENS AND CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III SECTION 313 ARE IDENTIFIED IN THIS SECTION. SEE DEFINITION PAGE FOR CLARIFICATION

Table with 5 columns: INGREDIENT, % (by WT), PEL, TLV, Note. Row 1: NAPHTHALENE, CAS #: 91-20-3, 100, 10 PPM, 10 PPM, (1)

Notes:

1) ACGIH - SHORT TERM EXPOSURE LIMIT (STEL) FOR NAPHTHALENE IS 15 PPM.

THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF SARA TITLE III.

SECTION IV PHYSICAL DATA

Table with 2 columns: Property, Value. Rows include Boiling Point, Vapor Pressure, Specific Vapor Density, Specific Gravity, Percent Volatiles, Evaporation Rate.

SECTION V FIRE AND EXPLOSION INFORMATION

FLASH POINT: 174.0 Deg F (78.9 Deg C)
EXPLOSIVE LIMIT (PRODUCT): LOWER - .9%
EXTINGUISHING MEDIA: REGULAR FOAM OR WATER FOG OR CARBON DIOXIDE OR DRY CHEMICAL
HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS; CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC.
FIREFIGHTING PROCEDURES: WEAR SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE DEMAND MODE WHEN FIGHTING FIRES.
WATER OR FOAM MAY CAUSE FROTHING WHICH CAN BE VIOLENT AND POSSIBLY ENDANGER THE LIFE OF THE FIREFIGHTER, ESPECIALLY IF SPRAYED INTO CONTAINERS OF HOT, BURNING LIQUID.
SPECIAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY HEAT, PILOT LIGHTS, OTHER FLAMES AND IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.
NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

NFPA CODES: HEALTH- 2 FLAMMABILITY- 2 REACTIVITY- 0

SECTION VI HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 10 PPM
THRESHOLD LIMIT VALUE 10 PPM

EFFECTS OF ACUTE OVEREXPOSURE: FOR PRODUCT

EYES - CAN CAUSE IRRITATION.
SKIN - CAN CAUSE REDDENING, IRRITATION, DERMATITIS, POSSIBLE SENSITIZATION.
BREATHING - INHALATION OF NAPHTHALENE MAY CAUSE HEADACHE, CONFUSION, NAUSEA AND VOMITING DEPENDING ON INDIVIDUAL SUSCEPTIBILITY.

72-62-7820-01

**MATERIAL SAFETY  
DATA SHEET****Ashland Chemical Company**

DIVISION OF ASHLAND OIL, INC.

P. O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 889-3333

24-HOUR EMERGENCY TELEPHONE (606) 324-1133



001009

NAPHTHALENE

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**SECTION II HEALTH HAZARD DATA (Continued)**

SWALLOWING - CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING, AND DIARRHEA.

**FIRST AID:**

IF ON SKIN: THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. IF IRRITATION OR RASH DEVELOPS, GET MEDICAL ATTENTION. REMOVE CONTAMINATED CLOTHING. LAUNDRY CONTAMINATED CLOTHING BEFORE RE-USE.

IF IN EYES: FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, GET MEDICAL ATTENTION.

IF SWALLOWED: IMMEDIATELY DRINK TWO GLASSES OF WATER AND INDUCE VOMITING BY EITHER GIVING IPECAC SYRUP OR BY PLACING FINGER AT BACK OF THROAT. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

**PRIMARY ROUTE(S) OF ENTRY:**

INHALATION, SKIN CONTACT

**EFFECTS OF CHRONIC OVEREXPOSURE: FOR PRODUCT**

REPEATED EXPOSURE TO NAPHTHALENE MAY CAUSE CATARACTS AND ALLERGIC SKIN RASHES AND MAY CAUSE DESTRUCTION OF RED BLOOD CELLS WITH ANEMIA, FEVER, JAUNDICE AND KIDNEY AND LIVER DAMAGE. AN UNPUBLISHED NTP STUDY WHERE MALE MICE WERE EXPOSED TO 10 AND 30 PPM NAPHTHALENE FOR TWO YEARS DEMONSTRATED AN INCREASED INCIDENCE OF LUNG TUMORS IN THE TEST ANIMALS.

OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: ANEMIA, EYE DAMAGE

OVEREXPOSURE TO THIS MATERIAL (OR ITS COMPONENTS) HAS BEEN SUGGESTED AS A CAUSE OF THE FOLLOWING EFFECTS IN HUMANS: KIDNEY DAMAGE, SPLEEN DAMAGE, EYE DAMAGE

**SECTION III REACTIVITY DATA**

HAZARDOUS POLYMERIZATION: CANNOT OCCUR

STABILITY: STABLE

INCOMPATIBILITY: AVOID CONTACT WITH: STRONG OXIDIZING AGENTS.

**SECTION IV SPILL OR LEAK PROCEDURES****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

SMALL SPILL: SWEEP UP MATERIAL FOR DISPOSAL OR RECOVERY.

LARGE SPILL: PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. SHOVEL MATERIAL INTO CONTAINERS. THOROUGHLY SWEEP AREA OF SPILL TO CLEAN UP ANY RESIDUAL MATERIAL.

**WASTE DISPOSAL METHOD:**

SMALL SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

LARGE SPILL: DISPOSE OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.

**SECTION V PROTECTIVE EQUIPMENT TO BE USED**

RESPIRATORY PROTECTION: IF WORKPLACE EXPOSURE LIMIT(S) OF PRODUCT OR ANY COMPONENT IS EXCEEDED (SEE SECTION II), A NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS (NEGATIVE PRESSURE TYPE) UNDER SPECIFIED CONDITIONS (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE.

VENTILATION: PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S).

PROTECTIVE GLOVES: WEAR RESISTANT GLOVES (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER).

EYE PROTECTION: CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED; HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT: TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

**SECTION VI SPECIAL PRECAUTIONS OR OTHER COMMENTS**

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATASHEET MUST BE OBSERVED.

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHETHER ORIGINATING WITH THE COMPANY OR NOT. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.