Denatured Ethyl Alcohol MSDS

1. PRODUCT AND COMPANY INFORMATION

REVISED 4/25/05

PRODUCT NAME:	HYSOL A-2 (P-200)
MSDS ID:	HAS200
CHEMICAL NAME SYNONYMS:	N A
C.A.S. NUMBER:	MIXTURE
CHEMICAL FAMILY:	DENATURED ALCOHOL
FORMULA:	SEE SECTION 2

DISTRIBUTED BY:
PTI PROCESS CHEMICALS
5414 Business Pwky
Ringwood, Il 60072
815-653-3856

EMERGENCY RESPONSE NUMBER:
INFOTRAC EMERGENCY # - 1-800-535-5053

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	OSHA HAZARD	% BY WT.
ETHYL ALCOHOL	64-17-5	YES	85.76 %
METHANOL	67-56-1	YES	13.33 %
METHYL ISOBUTYL KETONE	108-10-1	YES	0.91 %

3. HAZARDS IDENTIFICATIONS

PHYSICAL STATE:	LIQUID
COLOR:	CLEAR, COLORLESS
ODOR:	ALCOHOL ODOR

*** EMERGENCY OVERVIEW *** WARNING! FLAMMABLE LIQUID AND VAPOR. Keep away from heat, sparks, and open flame. May cause eye, skin, and respiratory irritation. Harmful or fatal if swallowed. May harmful or fatal if inhaled. May be harmful or fatal if absorbed through skin. May cause blindness. Prolonged or repeated contact may dry skin and cause irritation.

POTENTIAL HEALTH EFFECTS

ROUTES OF EXPOSURE:
Eyes. Skin. Inhalation. Ingestion. Absorption.

TARGET ORGANS:
Eyes. Skin. Respiratory system. Central nervous system. Liver. Blood. Reproductive system. Kidneys. Heart. Gastrointestinal tract.

EYE CONTACT:

Causes moderate irritation.
May cause: Stinging. Blinking. Tearing. Redness. Burning. High vapor concentrations may cause: irritation. Prolonged eye contact with high concentrations may lead to blindness.

SKIN CONTACT:
May cause mild irritation.
Prolonged and repeated contact with skin can cause defatting and drying of the skin which may result in skin irritation and dermatitis. Contact may cause: allergic skin reaction in a small proportion of individuals. Sensitization.

SKIN ABSORPTION:
May be harmful if absorbed through skin.
May be absorbed through the skin in toxic or lethal amounts.

INHALATION:
May cause moderate irritation.
Inhalation overexposure may lead to central nervous system depression, producing effects such as dizziness, headache, confusion, in coordination, nausea, weakness, and loss of consciousness. Vapor may cause irritation. Vapors in high concentration may irritate: mucous membranes. High vapor concentrations may cause: drowsiness, gastrointestinal disturbances, visual disturbances, death.

INGESTION:
May cause moderate irritation.
Toxic by ingestion. Small amounts may cause headache, abdominal pain, visual disturbance, blindness, death. May cause: dizziness, faintness, drowsiness, euphoria, nausea, vomiting, lack of coordination, coma, and staggering gait. Long term repeated oral exposure to ethanol may result in the development of progressive liver injury with fibrosis.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE TO PRODUCT:
Heart disorders. Liver disorders. Kidney disorders. Eye disorders. Blood disorders. Skin disorders. Respiratory system disorders. Emphysema. Bronchitis.

OTHER:
Intentional abuse, misuse, or other massive exposure may result in multiple organ damage and/or death. Ethyl Alcohol ingestion during pregnancy has been reported to cause birth defects in some infants. Persons on Disulfiram (Antabuse ®) Therapy should have been aware that ethyl alcohol in this product is hazardous just as is alcohol from any source. Disulfiram reactions (vomiting, headache, and even collapse) may follow ingestion of small amount of alcohol and have been described from skin contact. Repeated exposure by inhalation or absorption may cause systemic poisoning, brain disorders, impaired vision and blindness.

CANCER INFORMATION:
This product does not contain greater than 0.1% of the known or potential carcinogens listed in NTP, IARC, or OSHA. The International Agency for Research on Cancer (IARC) has determined that consumption of alcoholic beverages is casually related to the occurrences of malignant tumors of the oral cavity, pharynx, larynx, esophagus, and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not been verified in studies with laboratory animals. Established use of denatured ethanol and non-beverage uses of pure ethanol are not considered to pose any significant cancer hazard. (ACGIH) lists Ethanol as an A4 – Not classifiable as Human Carcinogen.

POTENTIAL ENVIRONMENTAL EFFECTS:
See Section 12.

4. FIRST AID MEASURES

EYE CONTACT:
Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.
Remove contact lenses if applicable.

SKIN CONTACT:
Flush skin with plenty of water while removing contaminated clothing and shoes. Do not reuse clothing or shoes until cleaned. If irritation develops or persists, get medical attention.
Wash with soap and water. Do not apply oils or ointments unless ordered by the physician.

INHALATION:
Remove to fresh air. If breathing is difficult, administer oxygen. If no breathing, give artificial respiration, preferably by mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:
If fully conscious, give two glasses of water, and then induce vomiting by touching back of throat with finger. Keep head below hips to prevent aspiration of liquid into the lungs. CALL A PHYSICIAN immediately. Never induce vomiting or give anything by mouth to an unconscious victim. Swallowing Methanol is life threatening. Onset of symptoms may be delayed for 18 to 24 hours after ingestion.

NOTE TO PHYSICIANS: Symptoms vary with the alcohol levels of the blood. Mild intoxication occurs when blood levels between 0.05%-0.15% and approximately 25% of individuals will show signs of intoxication at these levels. Above 0.15% the person is definitely under the influence of ethanol and 50%-95% of individuals at this level are clinically intoxicated. Severe poisoning occurs when the blood ethanol level is 0.3%-0.5%. above 0.5% the individual will be comatose and death occurs. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs or the excessive administration of fluids. In the presence of hypoglycemia, administer 5-10% glucose intravenously, plus thiamine 100 mg intramuscularly. Hemodialysis is indicated if the blood ethanol level is above 5 mg/ml. naloxone may be useful to reverse clinical alcoholic coma and 0.4-1.2 mg intravenously may arouse ethanol-intoxicated patients. Acute exposure to methanol, either through ingestion or breathing very high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours after exposure. Symptoms and signs are usually limited to headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within 2 hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended.

5. FIRE FIGHTING MEASURES

FLASH POINT:	58º F.
FLASH POINT METHOD:	TCC.
FLAMMABILITY LIMITS:	LEL: ¯3.3% UEL: ¯36.5%
AUTO IGNITION TEMPERATURE:	>725º F. (estimate)

EXTINGUISHING MEDIA:
Water spray. Dry chemical. Carbon Dioxide. Alcohol foam. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

FIRE FIGHTING METHODS:
Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors.
Avoid water accumulation. Product may reignite and burn on the water's surface. If container is not properly cooled, it can rupture in the heat of a fire. Concentrations of greater than 25% methanol in water can be ignited. Water may be ineffective depending upon depth of methanol burning. Protective fire fighting structural clothing is not effective protection from methanol. Do not walk through spilled product. Run-off from fire control may cause pollution.

FIRE AND EXPLOSION HAZARDS:
FLAMMABLE LIQUID. Vapors are heavier than air. Vapors may settle in low or confined areas, or travel long distances along the ground or surface to an ignition source where they may ignite, flashback, or explode. Keep away from heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, mechanical/electrical equipment). PROCESS HAZARD: sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature or pressure, or sudden ingress of air into hot equipment under a vacuum, may result in ignitions without the presence of obvious ignition sources. Published "auto ignition" or: ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the chemical process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Alcohol flames may be difficult to see because they are virtually colorless. This material may produce a floating fire hazard.

HAZARDOUS COMBUSTION PRODUCTS:
Carbon Dioxide. Carbon Monoxide. Unidentifiable organic materials. Formaldehyde.

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEAN-UP PROCEDURES:
FLAMMABLE LIQUID. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in section 8. Never exceed any occupational exposure limit.
Contain spill, place into drums for proper disposal. Soak up residue with non-flammable absorbent material. Place in non-leaking containers for immediate disposal. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. Fluorocarbon water foams may be applied to spill to diminish vapor and fire hazard. Protective fire fighting structural clothing is not effective protection from methanol. Do not walk through spilled product.

7. HANDLING AND STORAGE

STORAGE:
FLAMMABLE LIQUID. Store in a cool, well ventilated area away from all sources of ignition and out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Ground fixed equipment. Bond and ground transfer containers and equipment.

Do not use aluminum equipment for storage and/or transfer. Anhydrous methanol is non-corrosive to most metals at ambient temperatures except lead, magnesium, and platinum. However, coatings of copper) or copper alloys), zinc (including galvanized steel) or aluminum are unsuitable as they are attacked slowly. Tanks must be diked. Mild steel is the recommended construction material. Do not store in plastic.

HANDLING:
Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain residue (vapor, dust, or liquid) and can be dangerous. DO NOT PRESSURE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCE OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
Avoid dust or mist formation. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Use non-sparking tools. Ethyl Alcohol is listed on the EPA/TSCA inventory of chemical substances. The Bureau of Alcohol, Tobacco, and Firearms has issued regulations governing the production, procurement, and use of Ethyl Alcohol. All users must comply with these regulations. Launder contaminated clothing before reuse. Air-dry contaminated clothing in a well ventilated area before laundering. Always open containers slowly to allow any excess pressure to vent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
Local exhaust ventilation process enclosures or other engineering controls are required when handling or using this product to avoid overexposure. Avoid creating dust or mist. Use explosion-proof ventilation equipment. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

RESPIRATORY PROTECTION:
Respiratory protection may be required to avoid overexposure when handling this product.
If exposure limits are exceeded, wear: NIOSH-Approved organic respirator. NIOSH-Approved self contained breathing apparatus. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

EYE/FACE PROTECTION:
Wear safety glasses with side shields while handling this product.
Do not wear contact lenses. Wear additional eye protection such as chemical safety goggles and/or face shield when the possibility for eye contact with splashing or spraying liquid, or airborne material.

SKIN PROTECTION:
Prevent contact with this product. Wear gloves and protective clothing depending on condition of use.
Protective gloves: Chemical-resistant.

OTHER PROTECTIVE EQUIPMENT:
Eye-wash station. Safety shower. Rubber apron. Chemical safety shoes. Rubber boots. Protective clothing.

GENERAL HYGIENE CONSIDERATIONS:
Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices

require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

EXPOSURE GUIDELINES:	----------OSHA----------		----------ACGIH----------	
COMPONENT	PEL	STEL/C	TWA	STEL/C
Ethyl Alcohol	1000 ppm	Not Estab.	1000 ppm	Not Estab.
Methanol	200 ppm 200 ppm+S	Not Estab. 250 ppm+S	200 ppm-S	250 ppm-S
Methyl Isobutyl Ketone	100 ppm 50 ppm+	Not Estab. 75 ppm+	50 ppm	75 ppm

NOTE: S = Skin notation. + Vacated 1989 OSHA PEL (s).

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (º F)	: >148	SPECIFIC GRAVITY	: 0.7943 @ 60º F
FREEZING POINT (º F)	: <-144	% VOLATILE (WT%)	: 100%
MELTING POINT (º F)	: N.D.	EVAPORATION RATE	: >2 (nBuAc=1)
VAPOR PRESSURE (MM HG)	: >44 @ 20º C		
VAPOR DENSITY (AIR=1)	: 1.1	VOC (WT%)	: 100%
SOLUBILITY IN WATER	: COMPLETE	VOC (LBS/GAL)	: ˜6.62
Ph	: N.A.		

10. STABILITY AND REACTIVITY

STABILITY:
Stable under normal conditions.

CONDITIONS TO AVOID:
Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames.

INCOMPATIBILITY:
Strong oxidizing agents. Inorganic acids. Aluminum. Strong acids. Strong bases. May be corrosive to lead and aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Dioxide. Carbon Monoxide. Unidentifiable organic materials. Formaldehyde.

HAZARDOUS POLYMERIZATION:
Will not occur under normal conditions.

11. TOXICOLOGICAL INFORMATION

LD50 ORAL : NO DATA
LD50 SKIN : NO DATA

LD50 INHALATION : NO DATA

For detailed toxicological information on individual chemical components contained in this product, contact the address in Section 1 of this MSDS.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:
Extensive data on individual chemicals, call for information.

CHEMICAL FATE INFORMATION:
Extensive data on individual chemicals, call for information.

13. DISPOSAL CONSIDERATIONS

HAZARDOUS WASTE NUMBER: D001
NOTE: When methanol is a spent solvent, it is classified as a hazardous waste from a nonspecific source (F003), as stated in 40 CFR 261.31 .

DISPOSAL METHOD:
Dispose of in a permitted hazardous waste management facility following all local, state, and federal regulations. DO NOT pressurize, cut, weld, solder, drill, grind, or expose empty containers to heat, flames, sparks or other sources of ignition. Incineration is the recommended disposal method. Methanol wastes are not suitable for underground injection. Since empty containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION (Not meant to be all inclusive)

DOT (Department of Transportation):
Proper shipping name : FLAMMABLE LIQUID, N.O.S. (CONTAINS ETHYL ALCOHOL, METHYL ALCOHOL)
Hazardous Class : 3
Identification number : UN-1993
Packing Group : II
Label Required : FLAMMABLE
Reportable Quantity (RQ) : 5000# (Methanol)

15. REGULATORY INFORMATION

FEDERAL REGULATIONS:
TSCA INVENTORY STATUS:
All components of this product are on the TSCA inventory or are exempt from TSCA Inventory requirements.

SARA TITLE III SECTION 311/312 CATEGORY:
IMMEDIATE (ACUTE) HEALTH HAZARD : YES
DELAYED (CHRONIC) HEALTH HAZARD : YES
FIRE HAZARD : YES

SUDDEN RELEASE OF PRESSURE HAZARD : NO
REACTIVE HAZARD : NO

SARA SECTION 302/304/313/HAP:

COMPONENT	RQ (LBS) (*1)	RQ (LBS) (*2)	TPQ (LBS) (*3)	SEC 313 (*4)	HAP (*5)
Ethyl Alcohol	N.A.	N.A.	N.A.	NO	NO
Methanol	5000	N.A.	N.A.	YES	YES
Methyl Isobutyl Ketone	5000	N.A.	N.A.	YES	YES

FOOTNOTES

*1 = CERCLA Reportable Quantity
*2 = SARA Reportable Quantity
*3 = SARA EHS Threshold Planning Quantity
*4 = SARA 313 Toxic Chemical/ Category
*5 = U.S. EPA Hazardous Air Pollutant

STATE REGULATIONS:
CALIFORNIA--The following components are listed under Prop. 65:
This product may contain trace amounts of (a) chemical (s) subject to California's Proposition 65. If you require more information regarding this regulation, please contact your supplier.

WISCONSIN--The following components are listed as a Wisconsin HAP:
None.

16. OTHER INFORMATION

HMIS RATING SYSTEM
Health : 3*
Flammability : 3
Reactivity : 0
* = Chronic Health Hazard

NFPA RATING SYSTEM
Health : 1
Flammability : 3
Reactivity : 0
Special Hazard : None

MSDS ABBREVIATIONS: N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
C = Ceiling Limit
N.E./Not Estab. = Not Established

The data in this Material Safety Data Sheet relates only to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as a warranty or representation for which PTI Process Chemicals assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.