

Material Safety Data Sheet

Revision Issued: 9/16/2008 Supercedes: 2/21/2008 First Issued: 4/09/1987

Section I - Chemical Product And Company Identification

Product Name: Denatured Alcohol

CAS Number: N/A

HBCC MSDS No. CD01000



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Section II - Composition/Information On Ingredients

			Exposure Limits (TWAs) in Air		
Chemical Name	CAS Number	%	ACGIH TLV	OSHA PEL	STEL
Ethanol	64-17-5	88.1	1000 ppm	1000 ppm	N/A
Methanol	67-56-1	4.7	200 ppm	200 ppm	250 ppm

Section III - Hazard Identification

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

Summary of Acute Health Hazards

Ingestion: Short term overexposure may cause dizziness, drowsiness, decreased reaction, euphoria, nausea, vomiting, a staggering gait, or coma.

Inhalation: Short term overexposure may cause breathing difficulties, dizziness, drowsiness, nausea, and vomiting.

Skin: Excessive contact may cause skin dehydration.

Eyes: May cause irritation of the eyes.

Summary of Chronic Health Hazards: Systemic effects may include respiratory tract irritation, central nervous system depression in high concentrations, nausea and vomiting, liver and kidney damage, absorption through the intact skin, possible optic nerve damage and blindness, acidosis and inebriation.

Signs and Symptoms of Exposure: N/A

Medical Conditions Generally Aggravated by Exposure: None known

Note to Physicians: Ingestion of a large quantity of this material will result in methyl alcohol poisoning. In such a case, treatment should include the following: hemodialysis; the intravenous administration of ethanol (10 ml per hour) to interfere with the metabolism of methyl alcohol; and the administration of sodium bicarbonate to correct acidosis.

Section IV - First Aid Measures

Ingestion: Do not induce vomiting. GET MEDICAL ATTENTION IMMEDIATELY.

Inhalation: Remove victim to fresh air. If breathing difficulties continue, administer oxygen until medical help can be rendered. If breathing stops, begin artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

Skin: Wash thoroughly with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes: Immediately flush with plenty of water for at least 15 minutes. If irritation persists, GET MEDICAL ATTENTION.

Section V - Fire Fighting Measures

Flash Point: 13°C; 55°F

Autoignition Temperature: 363°C;
685.4°F

Lower Explosive Limit: 3.3% Volume
in air (ethyl alcohol)

Upper Explosive Limit: 19.0% Volume in
air (ethyl alcohol)

Unusual Fire and Explosion Hazards: Vapors from this liquid, and from migration, may be ignited by flames, sparks or other ignition sources at locations distant from the handling point.

Extinguishing Media: Use water spray, CO₂, alcohol-type or universal-type foams, or dry chemical.

Special Firefighting Procedures: The use of self-contained breathing apparatus is recommended for fire fighters. Use water spray to cool fire exposed containers and structures. Avoid spreading burning liquid with water used for cooling purposes. Ethanol vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Alcohols burn with a pale blue flame which may be extremely hard to see under normal lighting conditions. Personnel may only be able to feel the heat of the fire without seeing flames. Extreme caution must be exercised in fighting alcohol fires. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire.

Section VI - Accidental Release Measures

Keep sources of ignition and hot metal surfaces isolated from the spill. Flush spilled material into suitable retaining areas or containers with large quantities of water. Small amounts of spilled material may be absorbed into the appropriate absorbent. Prevent spilled liquid from entering sewers, storm drains, and natural waterways.

Section VII - Handling and Storage

Keep product containers cool, dry, and away from sources of ignition. Use and store this product with adequate ventilation. Keep product containers closed when not in use. Ground equipment to prevent accumulation of static charge. If pouring or transferring materials, containers must be bonded and grounded. Emptied containers can contain explosive vapors.

Section VIII - Exposure Controls/Personal Protection

Respiratory Protection: Use only a MSHA-approved or a NIOSH-approved respirator to prevent overexposure if vapor levels may or do exceed the exposure limits. Use either an atmosphere supplying respirator or an air purifying respirator for organic vapors.

Ventilation: This product should be confined within closed equipment, in which case general (mechanical) room ventilation should be suitable. Special, local ventilation is needed at points where vapors are expected to be vented to the workplace air.

Protective Clothing: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Safety goggles, chemical goggles and/or face shields are recommended to safeguard against potential eye contact, irritation, or injury.

Other Protective Clothing or Equipment: An eye bath and safety shower should be available.

Work/Hygienic Practices: All employees who handle denatured alcohol 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: -144°C; -227.2°F

Boiling Point/Range: 78.4°C;
173.12°F

Appearance/Color/Odor: Clear, colorless liquid with sweet alcohol odor

Solubility in Water: 100%

Vapor Pressure (mmHg): 44.6 @
20°C (68°F)

Specific Gravity(Water=1): 0.8090 @
20°C (68°F)

Molecular Weight: N/A

Vapor Density(Air=1): 1.59

% Volatiles: 100

How to detect this compound : N/A

Section X - Stability and Reactivity

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions to Avoid: Avoid heat, sparks, and open flames, bases, anhydride, isocyanate, organometallic.

Materials to Avoid: Strong oxidizing agents, strong acids or contaminants and alkali metals, halogens, silver salts, metal hydrides, hydrazine.

Hazardous Decomposition Products: Thermal decomposition in the presence of air may yield carbon monoxide and/or carbon dioxide.

Section XI - Toxicological Information

Exposure to over 1000 ppm may cause headache, drowsiness and lassitude, loss of appetite, inability to concentrate and irritation of the throat.

Acute Toxicity – Lethal Doses

Ethanol 64-17-5

LC50 (Inhl) Rat 20000 PPM 10 Hours

LD50 (Oral) Rat 7060 MG/KG BWT

LDLo (Oral) Human 1400 MG/KG BWT

Methanol 67-56-1

LC50 (Inhl) Rat 64,000 MG/KG 4 Hours

LD50 (Oral) Rat 5,628 MG/KG BWT

LD50 (Skin) Rabbit 15,800 MG/KG BWT

Section XII - Ecological Information

When released into the soil, this material is expected to readily biodegrade, and may release into groundwater. When released into water, the material is expected to readily biodegrade, may evaporate to a moderate extent, and not expected to bio-accumulate. When released into air, this material is expected to be readily degraded

by reaction with photo-chemically produced hydroxyl radicals, and readily removed from the atmosphere by wet deposition.

Section XIII - Disposal Considerations

Dispose of in accordance with applicable local, county, state and federal regulations.

Section XIV - Transport Information

DOT Proper Shipping Name: Denatured Alcohol

DOT Hazard Class/ I.D. No.: 3, UN1170, II

Section XV - Regulatory Information

Reportable Quantity: 5,000 Lbs. (CERCLA RQ)

RCRA Code: U154

Uniform Fire Code Rating: Class IB Flammable Liquid

NFPA Rating: Health - 0; Flammability - 3; Instability - 0

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

Carcinogenicity Lists: On the basis of several studies, NIOSH suspects that a carcinogen may have been present in the old "strong-acid" isopropyl alcohol manufacturing process. Epidemiologic and other studies are recommended by NIOSH to determine whether a carcinogen exists in the new "weak acid" IPA manufacturing process.

NTP: No IARC Monograph: No OSHA Regulated: Yes

Section 313 Supplier Notification: This product contains the following toxic chemical(s) subject to the reporting requirements of SARA TITLE III Section 313 of the Emergency Planning and Community Right-To Know Act of 1986 and of 40 CFR 372:

<u>CAS #</u>	<u>Chemical Name</u>	<u>% By Weight</u>
67-56-1	Methanol	4.7%

Section XVI - Other Information

Synonyms/Common Names: Denatured Ethanol, Ethyl Alcohol, Special Industrial Solvent 190, Grain Alcohol

Chemical Family/Type: Oxygenated Hydrocarbon Mixture/Alcohols

Section(s) changed since last revision: XIV

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.