Section 1: Identification

Common Name/Trade Name	ALCOHOL 190 PROOF USP	
Supplier Information	Letco Medical 1316 Commerce Drive NW Decatur, AL 35601 1 (800) 239-5288 +1 (734) 843-4693	**IN CASE OF EMERGENCY:** Chemtrec 1 (800) 424-9300 **(24 hours)**
Product Synonym(s)	Ethyl Alcohol 95%; Ethanol	
Relevant Use(s) of Product	Manufacture or Compounding of Substances	

Section 2: Hazards Identification

Classification of Substance or Mixture	Eye irritation (Category 2B), Flammable liquids (Category 2), Skin irritation (Category 2), Specific target organ toxicity - single exposure (Category 3)	
Signal Word	Danger	
Hazard Statement(s)	H225 H315+H320 H335	Highly flammable liquid and vapour Causes skin irritation Causes eye irritation May cause respiratory irritation
Pictogram(s)		
Precautionary Statement(s)	P210 P233 P240 P241 P242 P243 P264 P280 P303+P361+P353 P305+P351+P338 P337+P313 P370+P378 P403+P235 P501	Keep away from heat/sparks/open flames/hot surfaces â€“ No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/light/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. IF ON SKIN (or hair) Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. continue rinsing. If eye irritation persists Get medical advice/attention. In case of fire Use [EXTINGUISHING MEDIA] for extinction. Store in a well ventilated place. Keep cool. Dispose of contents/container to an approved waste disposal plant.
Hazards Not Otherwise Classified	Eyes: Causes irritation to the eyes. Can cause painful sensitization to light. Can cause a form of chemical conjunctivitis and cause corneal damage. Ingestion: Can cause gastrointestinal irritation with nausea, vomiting and diarrhea. Systemic toxicity and acidosis can occur. Advanced stages can lead to respiratory failure, kidney failure, coma, and death. Inhalation: Causes respiratory tract irritation. Can cause narcotic effects in high concentration. Vapours may cause dizziness or suffocation. Systemic toxicity and acidosis can occur. Advances stages can lead to respiratory failure, kidney failure, coma, and death. Skin: Causes moderate skin irritation. Can cause dermatitis by de-fatting the skin from prolonged or repeated contact.	
Ingredient(s) with Unknown Toxicity	No data Available	

Section 3: Composition/Information on Ingredients

Chemical Name	Ethyl Alcohol 190 Proof
Common Name	Ethyl Alcohol 95%
CAS Number	64-17-5

Material	Percent	CAS
Ethyl Alcohol	95.0-96.0%	64-17-5
Water	4.0-5.0%	7732-18-5

Impurities and/or Stabilizing Additives	No data available

Section 4: First Aid Measures

General Advice	Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If Inhaled	Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.
In Case of Skin Contact	Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. Contact a doctor. If irritation persists, get medical attention.
In Case of Eye Contact	Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.
If Swallowed	DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.
Most Important Symptoms and Effects	Symptoms will vary with alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.05-0.15%. Approximately 25% of individuals show signs of intoxication at these levels. Above 0.15% the person is definitely under the influence of ethanol; 50-95% of individuals are clinically intoxicated at these levels. Severe poisoning occurs when the blood is ethanol level is 0.3-0.5%. Above 0.5% the individual will be comatose and death can occur. The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. Avoid the use of depressant drugs and administering excessive amounts of fluids. Signs and Symptoms of Exposure: Central nervous system depression, narcosis, damage to the heart. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 5: Fire Fighting Measures

Suitable Extinguishing Media	SMALL FIRE: Use dry chemicals, CO2, water spray or alcohol-resistant foam. LARGE FIRE: Use water spray, water fog or alcohol-resistant foam. Cool all affected containers with flooding quantities of water.
Special Hazards Arising From the Substance/Mixture	Carbon monoxide is expected to be the primary hazard.
Special PPE and/or Precautions for Firefighters	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Do not inhale vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Methods and Materials Used for Containment	Highly flammable liquid. Eliminate all sources of ignition. All equipment used when handling this product must be grounded. A vapor suppressing foam may be used to reduce vapours. Do not touch or walk through spilled material. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations. Use clean non-sparking tools to collect absorbed material.
Cleanup Procedures	Highly flammable liquid. Eliminate all sources of ignition. All equipment used when handling this product must be grounded. A vapor suppressing foam may be used to reduce vapours. Do not touch or walk through spilled material. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations. Use clean non-sparking tools to collect absorbed material.

Section 7: Handling and Storage

Precautions for Safe Handling	Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Open and handle container with care. Metal containers involved in the transfer of this material should be grounded and bonded.
Conditions for Safe Storage	Keep container tightly closed in a cool, dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Consult local fire codes for additional storage information.

Section 8: Exposure Controls/Personal Protection

Components with Workplace Control Parameters	Occupational Exposure Limits: Ethyl alcohol US (ACGIH) STEL, 1000 ppm, Note: Upper Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans. Ethyl alcohol, US (OSHA), TWA, 1000 ppm/1,900 mg/m3, Note: 29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants. Ethyl alcohol, US (OSHA), IDHL, 3300 ppm, Note: None.
Appropriate Engineering Controls	General room or local exhaust ventilation is usually required to meet exposure limit (s). Electrical equipment should be grounded and conform to applicable electrical code.
PPE - Eye/Face Protection	Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.
PPE - Skin Protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
PPE - Body Protection	Choose body protection according to the amount and concentration of the dangerous substance at the work place. Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
PPE - Respiratory Protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Section 9: Physical and Chemical Properties

Appearance	Liquid. Colorless liquid/invisible vapor.
Upper/Lower Flammability or Explosive Limits	Upper/Lower flammability or explosive limits: 19% (V)/3.3% (V) (for 100% ethanol)
Odor	Sweet. Alcohol-like
Vapor Pressure	59.5 hPa (44.6 mmHg) at 20 Degrees Celsius (68 Degrees Fahrenheit) (for 100% ethanol)
Odor Threshold	No data available
Vapor Density	1.6
pH	No data available
Relative Density	0.816 g/mL at 25 Degrees Celsius (77 Degrees Fahrenheit)
Melting Point/Freezing Point	No data available
Solubility	Miscible
Initial Boiling Point and Boiling Range	80°C (176°F) (for 100% ethanol)
Flash Point	17°C (63°F)-Closed Cup
Evaporation Rate	Specific data not available - expected to be rapid.
Flammability (Solid, Gas)	Flammable
Partition Coefficient	No data available
Auto-Ignition Temperature	363°C (685°F) (for 100% ethanol)
Decomposition Temperature	No data available
Viscosity	No data available

Section 10: Stability and Reactivity

Reactivity	No data available
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	Vapors may form explosive mixture with air.
Conditions to Avoid	Heat, flames , and sparks. Extreme temperatures and direct sunlight.
Incompatible Materials	Alkali metals, Ammonia, Oxidizing agents, Peroxides, Strong Inorganic Acids.
Hazardous Decomposition Products	Carbon oxides are expected to be, under fire conditions, the primary hazardous decomposition products.

Section 11: Toxicological Information

Acute Toxicity - LD50 Oral	LC50 (Oral) Rat 7060mg/Kg BWT, LDLo (Oral) Human 1400 mg/Kg BWT
Acute Toxicity - Inhalation	LC50 (Inhalation) Rat 20000 ppm 10 hrs.
Acute Toxicity - Dermal	Standard Draize skin test (rabbit) - Dose: 20mg/24hrs Reaction: Moderate Repeated exposure may cause skin dryness or cracking.
Acute Toxicity - Eye	Eye exposure to Ethanol generally causes transient pain, irritation, and reflex lid closure. A foreign-body sensation may persist for one to two days. Vapors produce transient stinging and tearing, but no apparent adverse effects. Transiently impaired perception of color may occur with acute ingestion or chronic alcoholism. Standard Draize eye test (rabbit) - Dose: 500 mg Reaction: Severe Dose: 500 mg/24 hrs Reaction: Mild.
Skin Corrosion/Irritation	Standard Draize skin test (rabbit) - Dose: 20 mg/24 hrs Reaction: Moderate Repeated exposure may cause skin dryness or cracking.
Serious Eye Damage/Irritation	Eye exposure to Ethanol generally causes transient pain, irritation, and reflex lid closure. A foreign-body sensation may persist for one to two days. vapours produce transient stinging and tearing, but no apparent adverse effects. Transiently impaired perception of color may occur with acute ingestion or chronic alcoholism. Standard Draize eye test (rabbit) - Dose: 500mg Reaction: Severe Dose: 500mg/24 hrs Reaction: Mild
Respiratory or Skin Sensitazation	Standard Draize skin test (rabbit) - Dose: 20 mg/24hrs Reaction: Moderate Repeated exposure may cause skin dryness or cracking.
Germ Cell Mutagenicity	No data available
Carcinogenicity IARC	Not classifiable as a human carcinogen.
Carcinogenicity ACGIH	Not classifiable as a human carcinogen.
Carcinogenicity NTP	Not classifiable as a human carcinogen.
Carcinogenicity OSHA	Not classifiable as a human carcinogen.
Reproductive Toxicity	Reproductive toxicity - Human- female - Oral. Effects on Newborns - measured low apgar scores and showed signs of alcohol dependence.
Specific Target Organ Toxicity - Single Exposure	Inhalation-May cause respiratory irritation.-Lungs
Specific Targer Organ Toxicity - Repeated Exposure	No data available
Aspiration Hazard	No data available

Section 12: Ecological Information

Toxicity	Acute Fish toxicity (ETHANOL): LC50/96 HOUR Oncorhynchus mykiss (rainbow trout) > 10,000 mg/l. LC50/96 HOUR Pimephales promelas (fathead minnow) > 13,400 mg/l. Toxicity to aquatic plants (ETHANOL): Growth inhibition/96 HOURS Chlorella vulgaris (Fresh water algae) 1,000 mg/l. Toxicity to microorganisms (ETHANOL): Toxicity Threshold/Pseudomonas putida 6,500 mg/l. Summary: Inhibition of cell multiplication begins.
Persistence and Degradability	Biodegration is expected
Bio-accumulative Potential	Bioaccumulation is unlikely
Mobility in Soil	No data available
Other Adverse Effects	No data available

Section 13: Disposal Considerations

Waste Treatment Methods Product	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Waste Treatment Methods Packaging	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.
Special Precautions Landfill or Incinerations	No data available.
Other Information	No data available

Section 14: Transport Information

UN Number	1170
UN Proper Shipping Name	Ethanol Solutions
Transport Hazard Class(es)	3
Packaging Group	II
Environmental Hazards	Marine pollutant: No

Section 15: Regulatory Information

Safety, health and environmental regulations specific for the product in question: OSHA Hazards: Flammable liquid, Target Organ Effect, Irritant. All Ingredients are on the following inventories or are exempted from listing (Country/Notification): Australia/AICS. Canada/DSL. China/IECS. European Union/EINECS. Japan/ENCS/ISHL. Korea/ECL. New Zealand/NZIoC. Philippines/PICCS. United States of America/TSCA. SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. SARA 313 Components: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. SARA 311/312 Hazards: Acute Health Hazard, Chronic Health Hazard, Fire Hazard. CERCLA: No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA. Massachusetts Right To Know Components: Ethanol CAS-No.64-17-5 Revision Date 2007-03-01. Pennsylvania Right To Know Components: Ethanol CAS-No.64-17-5 Revision Date 2007-03-01. New Jersey Right To Know Components: Ethanol CAS-No.64-17-5 Revision Date 2007-03-01. California Prop 65 Components: WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm (ETHYL ALCOHOL) CAS No. 64-17-5 Revision Date: December 11, 2009.

Section 16: Other Information

Prepared By	Scarlotte Smith
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