

Section 1: Product & Company Information

Product Identifier: Ethanol, 190 Proof

Other Means of Identification

Product Number: No data available.

Recommended Use and Restrictions on Use

Recommended Use: General purpose organic solvent.

Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Flammable, Liquids - 2

Health Hazard(s)

Corrosion/Irritation, Skin - 2

(Corrosion)Damage/Irritation, Eye - 2A

Specific Target Organ Toxicity (STOT)-Respiratory Irritation, Single exposure - 3

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

DANGER

Hazard Symbol(s)



Hazard Statement(s)

H225: Highly flammable liquid and vapor.

H315: Causes skin Irritation.

H319: Causes serious eye Irritation.

H335: May cause respiratory Irritation.

Precautionary Statements

General

Not applicable.

Prevention

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting/equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

P264: Wash face, hands and any exposed skin thoroughly after handling.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P321: Specific treatment (see supplemental first aid instructions on this label).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P370 + P378: In case of fire: Use suitable extinguishing media for extinction.

Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNO C)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Ethyl Alcohol	190 Proof Ethyl Alcohol; Ethanol; Ethyl Alcohol Absolute; Dehydrated Ethanol; Anhydrous Ethanol; Ethyl Alcohol 95%	64-17-5	92.0 – 95.0	No

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.

2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.

3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

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.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

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.

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.

Ingestion

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/effects, acute and delayed

Symptoms

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.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically. Symptoms may be delayed.

Section 5: Fire-Fighting Measures

General Fire Hazards

Print Date: February 20, 2017

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. May produce a floating fire hazard. Static ignition hazard can result from handling and use. Vapors may travel to source of ignition and flash back. Vapors may settle in low or confined spaces.

Suitable (and Unsuitable) Extinguishing Media

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.

Unsuitable Extinguishing Media

Avoid water in straight hose stream; will scatter and spread fire.

Specific Hazards Arising from the Chemical

Carbon monoxide is expected to be the primary hazardous combustion product.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

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. Use water spray to keep fire-exposed containers cool. Move containers from fire area if you can do so without risk.

Special Protective Equipment for Fire-Fighters

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 vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and Materials for Containment and Clean-Up

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 vapors. 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.

Notification Procedures

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Environmental Precautions

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

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, including any Incompatibilities

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

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Ethyl alcohol	TWA	1000 ppm / 1,900 mg/m ³	US OSHA Table Z-1
Ethyl alcohol	IDHL	3300 ppm	US OSHA Table Z-1
Ethyl alcohol	STEL	1000 ppm	US. ACGIH Threshold Limit Values

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

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.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Use explosion-proof ventilation equipment.

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.

Skin Protection

Hand Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's 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.

Other

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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).

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Colorless liquid / invisible vapor.

Odor:

Sweet. Alcohol-like

Odor Threshold:

No data available.

pH:

No data available.

Melting Point/Freezing Point:

-114 °C (-173 °F)

Initial Boiling Point and Boiling Range:

78.3 °C (172.9 °F)

Flash Point:

17 °C (63 °F) - closed cup

Evaporation Rate (butyl acetate=1):

Specific data not available - expected to be rapid.

Flammability (solid, gas):

Flammable

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: 19% volume
Flammability Limit – Lower: 3.3% volume
Explosive Limit – Upper: Not applicable.
Explosive Limit – Lower: Not applicable.

Vapor Pressure:

59.5 hPa (44.6 mmHg) at 20 °C (68 °F)

Vapor Density (air =1):

1.6

Relative Density (water=1):

0.816 g/mL at 25 °C (77 °F)

Solubility(ies):

Solubility in water: completely soluble
Solubility (other): No data available.

Partition coefficient (n-octanol/water):

No data available.

Auto-Ignition Temperature:

363 °C (685 °F)

Decomposition Temperature:

Not pertinent.

Viscosity:

No data available.

Other Information:

Molecular Weight: 46.07 g/mol
Formula: C₃H₈O

Section 10: Stability and Reactivity

Reactivity

Stable under conditions of normal use.

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

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation.

Skin Contact: Mildly irritating to the skin. May cause dermatitis by de-fatting the skin from prolonged or repeated contact.

Eye Contact: Irritating to the eyes. May cause painful sensitization to light. May cause chemical conjunctivitis and corneal damage.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Ethanol: LD 50 (Rat): 7,060 mg/kg BWT

Ethanol: LDLo (Human) 1,400 mg/Kg BWT

Dermal

No data available.

Inhalation

Ethanol: LC 50 (Rat, 10 h): 20,000 ppm

Repeated Dose Toxicity

No data available.

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/Eye 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. 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

Respiratory/Skin Sensitization

Not a skin sensitizer.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Ethanol: Group 1, Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

May damage fertility or the unborn child.

Specific Target Organ Toxicity – Single Exposure

Central nervous system. Eyes. Respiratory tract irritation

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage. Long term exposure can cause loss of appetite, weight loss, nervousness, memory loss, mental retardation.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Ethanol: LC50 / 96 HOUR Oncorhynchus mykiss (rainbow trout) > 10,000 mg/l

Ethanol: LC50 / 96 HOUR Pimephales promelas (fathead minnow) > 13,400 mg/l

Aquatic Invertebrates

Toxicity Threshold / Pseudomonas putida 6,500 mg/l

Summary: Inhibition of cell multiplication begins.

Toxicity to Aquatic Plants

Growth inhibition / 96 HOURS Chlorella vulgaris (Fresh water algae) 1,000 mg/l

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

Biodegradation is expected.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Bioaccumulation is unlikely.

Partition Coefficient n-octanol / water (log Kow)

Ethanol: Log Kow: -0.31

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Section 13: Disposal Considerations

Disposal Instructions

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.

Contaminated Packaging

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14: Transportation Information

US Department of Transportation (DOT)

UN Number: UN1170

UN Proper Shipping Name: Ethanol solutions

Technical Name: N/A

Hazard Class: 3

Subsidiary Hazard Risk: -

Packing Group: II

DOT Label/Placard Exemptions: Not determined

Special Provisions: 24, IB2, T4, TP1

Packaging Exceptions: 49CFR 173.150, 4b

Packaging Non-Bulk: 49CFR 173.203

Packaging Bulk: 49CFR 173.242

Reportable Quantity (RQ): N/A

Marine Pollutant: No

Poison Inhalation Hazard: No

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Emergency Response Guidebook (ERG) #: 127

Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: Yes
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: Yes

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 2

Chronic Health Hazard: *

Flammability: 3

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 2

Fire Hazard: 3

Reactivity Hazard: 0

Special: N/A W OX COR POI

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

Prepared By: Regulatory Manager

Version #: 001

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Revision Date: -

Revisions: -

Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL - Immediately Dangerous to Life and Health
Kg - Kilogram
l - Liter
lb - Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml - milliliter
N/A - Not Applicable
N/D - Not Determined
PEL - Permissible Exposure Limit
REL - Recommended Exposure Limit
STEL - Short-term Exposure Limit
TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists
AIHA - American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS - Chemical Abstracts Service
DOT - US Department of Transportation
EPA - US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - US Occupational Health and Safety Administration
SARA - US EPA Superfund Amendments and Reauthorization Act
TSCA - US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

Disclaimer

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