Safety Data Sheet

Denatured with Bergamot Oil Ethyl Alcohol 190 Proof
(This SDS is valid for all grades of Organic Alcohol)

Section I: Identification of Substance/ Product and of Company

Product Identifier: Denatured Ethanol

Synonyms: Denatured Alcohol 38B-13; Denatured Ethanol, Ethanol Denatured with Bergamot Oil; SDA 38B-13, 95%

Other Identification: CAS No. 64-17-5
EINECS No. 200-578-6

Formula: C2H5OH

Manufacturer/ Distributor:

Alchemical Solutions, LLC
Ashland, Oregon USA
Phone (541) 201-1050
Fax (541) 482-6564

2305 Ashland Street
Suite C- PMB #442
Ashland, OR 97520
Recommended Use: General purpose organic solvent

Emergency Contact: InfoTrac 800-535-5053

Section II: Hazards Identification

Emergency Overview:
Hazardous. Flammable Liquid. Material can burn with no visible flame. May cause irritation to eyes, skin, respiratory and central nervous system.

Product Information (541) 201-1050/ Emergency Assistance INFOTRAC 800-535-5053
OSHA Hazards: Flammable Liquid, Target Organ Effect, Irritant

Exposure/ Potential Health Effects:

Skin: No harmful effects with normal skin. May cause dermatitis with repeated contact.
Inhalation: High vapor concentration may cause burning sensation in nose and throat and stinging of eyes. At high concentrations may cause irritation, dizziness, faintness, drowsiness, nausea and vomiting. Long term may cause coma or respiratory failure.
Eye: May cause irritation including stinging, tearing, and redness. May cause corneal damage and conjunctivitis.
Long Term Oral Exposure: gastrointestinal irritation with nausea, vomiting, and diarrhea. Long term oral exposure may result in liver injury with fibrosis.
Other Health Hazards: Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus. Repeated exposure may aggravate liver injury produced from other causes.

NFPA

GHS label elements

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Signal Word: Danger

Hazard Statements:
H225                  Highly flammable liquid and vapor.
H319                  Causes serious eye irritation.

Precautionary Statements:
P501                   Dispose of contents and container to an approved waste disposal plant.
P240                   Ground/bond container and receiving equipment.
P337 + P313            If eye irritation persists: Get medical attention.
P305 + P351 + P338     If in eyes rinse with water for several minutes: Remove contact lenses:
                       Seek medical attention.
P303 + P361 + P353     If on skin remove immediately remove/take off any contaminated clothing: Rinse skin with water.
P370 + P378            In case of fire use dry sand, chemical, or alcohol-resistant foam.
P210                   Keep away from sparks, heat, flame, and hot surfaces. No smoking
P233                   Keep container tightly closed.
P403 + P235            Store in cool, well-ventilated place.
P243                   Take measures of precaution against static discharge.
P241                   Use only explosion-proof electrical, lighting and ventilating equipment.
P242                   Use non-sparking tools.
P264                   Wash hands after handling.
P280                   Wear protection for eye, face and hands.
P261                   Avoid breathing dust/fumes/gas/mist/vapors

Section III: Composition/ Information on Ingredients

Chemical Identity:        Alcohol
Common name:             Denatured Alcohol 38B-13; Denatured Ethanol, Ethanol Denatured with Lavender; SDA 38B-13, 95%
CAS #:                   64-17-5
ICSC #:                  0044
EINECS #:                200-578-6
RTECS #:                 KQ6300000
UN #:                    UN1170
EC #:                    603-002-22-5

%Weight     Material            CAS       Exposure Limits
------------------------------------------------------------------
91.08        Ethyl Alcohol       64-17-5   1000ppm TWA
1.45         Bergamot Oil        8007-75-8 None Established
7.47         Water               7732-18-5 None Established

Section IV: First Aid

Product Information (541) 201-1050 / Emergency Assistance INFOTRAC 800-535-5053
General Advice: Take proper precautions for your own health and safety. Contact a physician for all cases of over-exposure.

Swallowing: If patient is fully conscious, give water. Do not induce vomiting. If vomiting does occur, have victim lean forward to prevent choking. Obtain medical attention.

Skin: Wash skin with soap and water for at least fifteen minutes. Contact physician if irritation persists.

Inhalation: Remove to fresh air. Give artificial respiration if not breathing. Get medical attention.

Eyes: Flush eyes with water for at least fifteen minutes. Get medical attention.

Note to Physicians: Symptoms vary with alcohol levels of the blood. Mild alcohol intoxication occurs at blood levels between 0.5-.15%. Approximately 25% of individuals show signs of intoxication at these levels. Above .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 or the excessive administration of fluids.

Section V: Fire Fighting Measures

Fire/Explosive Properties:

Flash Point: 62F(17c) Tag Closed Cup
74F(23c) Tag Open Cup
Flammable Limits in Air: 3.3-19.0%(by volume)
Flammability Classification: 3(NFPA)
IB Flammable Liquid(OSHA, NFPA)

Suitable(and unsuitable) extinguishing media:

Small Fire: Use dry chemicals, CO2, alcohol-resistant foam or water spray.

Large Fire: Use alcohol-resistant foam, water spray or fog. Flood affected containers with water to cool.

Specific Hazards from chemical: Carbon Monoxide is a primary combustion product.

Unusual Fire and Explosion Hazards:
Vapors may travel to source of ignition and flash back.
Vapors may settle in low places.
Re-ignition is possible.
Keep unopened containers cool by spraying with water.
Use self-contained breathing apparatus and protective clothing.
Static ignition hazard can result from handling and use.
Floating fire hazard may be produced.

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Note:
Personnel may only be able to feel the heat as alcohol may burn with a pale blue flame that is extremely hard to see. Use extreme caution. Use maximum distance to fight fires or use unmanned hose holders. Cool containers with water flooding well after fire is out. Withdraw immediately if sound from venting safety devices or discoloration of tank occurs. Stay away from engulfed tanks.

Section VI: Spill/Accidental Release Measures

Evacuate personnel to safe areas. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Beware vapor accumulation.
Small spills can be flushed with large amounts of water.
Large spills: Eliminate all ignition sources. Extremely flammable liquid. Ground all equipment, do not walk through spill; stop spill if possible to prevent entry into sewers or drains. Use vapor suppressing foam to reduce vapors. Absorb spill with non-combustible matter and transfer to containers. Use non-sparking tools.

Section VII: Handling and Storage

Safe Handling:
Flammable Material.
Keep away from heat, sparks, flame and sudden releases of hot organic vapors or mists.
Keep away from processing equipment.
No smoking.
Take measures to ensure no electrostatic build-up.
Treat containers as hazardous.
Metal containers should be bonded and grounded.
Avoid contact with eyes.
Do not inhale.
Use adequate ventilation, vapors may settle into low areas.
Wash thoroughly after contact.
Open and handle with care.

Safe Storing:
Keep container closed.
Keep in cool, dry and ventilated area.
Carefully reseal and keep upright to prevent leakage.
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Consult local fire codes for additional storage information.

Section VIII: Exposure Controls/ Personal Protection

Product Information (541) 201-1050/ Emergency Assistance INFOTRAC 800-535-5053
Biological limit values:

<table>
<thead>
<tr>
<th>Component</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>US (OSHA)</td>
<td>TWA</td>
<td>1000 ppm/1,900 mg/m³</td>
<td>29 CFR 1910.1000 Table z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>US (OSHA)</td>
<td>IDHL</td>
<td>3300 ppm</td>
<td>None</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>US (ACGIH)</td>
<td>STEL</td>
<td>1000 ppm</td>
<td>Upper respiratory tract irritation confirmed animal carcinogen with unknown relevance to humans</td>
</tr>
<tr>
<td>Bergamot Oil</td>
<td>/</td>
<td></td>
<td>No Limits</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>/</td>
<td></td>
<td>No Limits</td>
<td></td>
</tr>
</tbody>
</table>

**Ventilation:** Special, Local ventilation is needed where vapors escape to the workplace air.

**Respiratory Protection:** Use self-contained breathing apparatus in high vapor concentration. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Personal Protective Equipment:** gloves, lab-coat or uniform, safety glasses or goggles, eye wash fountain and quick drench facilities.

**Hygiene measures:** Use good industrial hygiene and safety practices. Wash hands beginning, end of workday and at breaks.

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**Section IX: Physical and Chemical Properties**

Appearance: clear, colorless liquid  
Odor: characteristic  
Vapor pressure: 59.5 hPa (44.6 mmHg) at 20°C (68°F) (for 100% ethanol)  
Vapor Density: 1.6 (air = 1)  
Boiling point: 80°C (176°F)  
Freezing point: -100°C (-148°F)  
Solubility in Water: 100% @ 20°C  
Specific Gravity: .807 @ 20/20°C  
Density @ 15.5°C (60°F) 6.67 lbs./gal  
Evaporation Rate: 3.0 (butyl acetate = 1)  
Percent Volatiles: 100%  
Formula (ethanol): C₂H₆O  
Formula (water): H₂O  
Bergamot Oil: N/A  
Molecular Weight (ethanol): 46.07 g/mol  
Molecular Weight (water): 18.02 g/mol

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**Section X: Stability and Reactivity**

Product Information (541) 201-1050 / Emergency Assistance INFOTRAC 800-535-5053
Stability: Stable under correct storage conditions
Conditions to avoid: Heat, sparks, flame. Extreme Temperatures and direct sunlight.
Incompatibility/Materials to avoid: Strong oxidizing agents; strong inorganic acids.
Hazardous Combustion/Decomposition Products: Carbon Monoxide and/or Carbon Dioxide
Hazardous Polymerization: Will not occur.

Section XI: Toxicology Information

Ethyl Alcohol 64-17-5

Summary: Ethanol is not toxic by OSHA standards. Ingesting ethanol with sedatives or tranquilizers will increase change of toxicity.

Symptoms of Exposure: Central Nervous System depression, narcosis, damage to liver and heart. Chemical and physical toxicological properties have not been fully tested.

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Carcinogenicity:
IARC, ACGIH, NTP, OSHA: Not classifiable as a human carcinogen

Irritation:
Eyes- exposure to eyes may result in pain, stinging, irritation and reflex lid closure. Vapors may cause stinging but no apparent adverse effect. Impaired vision may occur.
Skin-Repeated exposure may cause skin to dry and crack.

Other:

<table>
<thead>
<tr>
<th>Contact</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ingestion</td>
<td>May cause nausea, vomiting, diarrhea and gastrointestinal irritation. May cause central nervous system depression: excitement followed by headache, dizziness, drowsiness, and nausea. High concentration may result in collapse, unconsciousness and possible death due to respiratory failure.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>High concentrations of Inhalation may cause nausea, headache, dizziness, suffocation and coma. May cause respiratory tract irritation.</td>
</tr>
<tr>
<td>Chronic</td>
<td>Can cause reproductive effects. Prolonged exposure may cause liver, kidney and heart damage. Long term exposure can cause loss of appetite, weight loss, nervousness, memory loss, mental retardation.</td>
</tr>
</tbody>
</table>

Water 7732-18-5

Summary: No toxicity effects of this product.

Carcinogenicity:
IARC, ACGIH, NTP, OSHA: No component of this product at levels greater than .1% is presented

Product Information (541) 201-1050/ Emergency Assistance INFOTRAC 800-535-5053
as a carcinogen or potential carcinogen.

Section XII: Ecological Information

**Ethyl Alcohol 62-17-5**

Ecotoxicity (aquatic and terrestrial): Acute fish toxicity

Toxicity to aquatic plants: Growth Inhibition

Toxicity to Microorganisms: Inhibits cells to multiply

Bioaccumulation is unlikely. Biodegradation is expected.

**Water 7732-18-5**

Ecotoxicity (aquatic and terrestrial, where available), Persistence and degradability, Bioaccumulative potential:

No data

**Bergamot Oil 8007-75-8**

Ecotoxicity (aquatic and terrestrial, where available), Persistence and degradability, Bioaccumulative potential:

No data

Section XIII: Disposal

Disposal of product and contaminated packaging: Burn in chemical incinerator equipped with afterburner and scrubber. Use care as product is highly ignitable. Contact a professional waste disposal service. Observe all federal, state, and local environmental regulations. Handle with care. Product highly flammable.

Section XIV: Transport Information

IMDG: UN-Number UN1170
Class 3
Packing Group II
EMS-No.: F-E, S-D
Proper shipping name: Ethanol Solutions
Not a Marine pollutant

Product Information (541) 201-1050/ Emergency Assistance INFOTRAC 800-535-5053
IATA: UN1170 Class 3, Packing Group II
Proper shipping name Ethanol Solutions

<table>
<thead>
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<th>UN Number</th>
<th>UN1170</th>
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<tbody>
<tr>
<td>UN Proper Shipping Name</td>
<td>Ethanol Solutions</td>
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<tr>
<td>Transport Hazard Class</td>
<td>3</td>
</tr>
<tr>
<td>Packing Group</td>
<td>II</td>
</tr>
</tbody>
</table>

**Section XV: Regulatory Information**

Federal EPA/OSHA:

CERCLA: No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA (act of 1980)

SARA (302, 304, 311, 312): Title III requires emergency planning based on threshold planning quantities and release reporting based on reportable quantities in 40 CFR 355 (311/312 Acute Health Hazard, Chronic Health Hazard, Fire Hazard)

SARA (313): Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372.
(This material does not contain any chemical components with known CAS numbers that exceed the reporting limits.)

Toxic Substances Control Act (TSCA) Status: All components of this product are listed or are exempt from listing on the TSCA inventory.

State Right to Know:
Product Information (541) 201-1050/ Emergency Assistance INFOTRAC 800-535-5053

Massachusetts- Ethanol CAS-No. 64-17-5 Revision date 2007-03-01
Pennsylvania- Ethanol CAS-No. 64-17-5 Revision date 2007-03-01
New Jersey- Ethanol CAS-No. 64-17-5 Revision date 2007-03-01
California- Warning. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Ethyl alcohol CAS 64-17-5 Revision Date: 2009-12-11

**Section XVI: Other Information on Preparation and Revision of the SDS**

The information contained herein is based on data considered to be accurate, However, no warranty is expressed regarding the accuracy of these data or the results to be obtained from the use thereof. It is the user’s obligation to determine the conditions of safe use of the product. Revised 1/26/16.

Product Information (541) 201-1050/ Emergency Assistance INFOTRAC 800-535-5053