

MATERIAL SAFETY DATA SHEET

Section 1. Company Identification and Product Information			
Product Name or Identity:	Ethanol (65%) - 1 Gallon, 1 x 4 Gallon		
Manufacturer's Name:	Neogen Corporation	Emergency Phone No.:	517/372-9200
	620 Leshar Place	Fax No.:	517/372-0108
	Lansing, MI 48912	e-mail:	foodsafety@neogen.com
Date Prepared or Revised: August 2011	Chemtrec: (800) 424-9300 Outside US and Canada: (703) 527-3887		

Section 2. Composition / Information on Hazardous Ingredients			
This product is a mixture of the substances listed below with the addition of nonhazardous materials.			
Hazardous Components Specific Chemical Identity:	CAS-No.	%	Hazard Symbol
Ethanol	64-17-5	65 %	F (Flammable)
Natural Gas Condensate	68919-39-1	1.9 – 2.5%	F (Flammable)
Benzene	71-43-2	0.13 %	F (Flammable), T (Toxic)

Section 3. Health Hazard Identification	
Health Hazards: <i>(Acute and Chronic)</i>	Information pertaining to particular dangers for man and environment. R 11, Highly flammable. R 22, Harmful if swallowed. R 38, Irritating to skin. R 41, Risk of serious damage to eyes. R 45, May cause cancer (Benzene at 100% concentration, this product contains 0.13%).

Section 4. First Aid Measures	
Emergency / First Aid Procedures:	Notes to Physician: Person with skin or eyes disorders or liver, kidney, chronic respiratory disease, or central and peripheral nervous system disease may be at increased risk from exposure to this substance. Antidote: Replace fluid and electrolytes. Ingestion: If swallowed, seek medical attention. Do not induce vomiting. Wash out mouth with water, provided person is conscious. Show physician product label. Never give anything by mouth to an unconscious person. Inhalation: If inhaled, supply fresh air or oxygen. Seek medical attention immediately. If not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Eye Contact: Rinse opened eye for at least 15 minutes under running water, lifting lower and upper eyelids occasionally. Remove contact lenses. Seek medical attention immediately. Skin Contact: Remove contaminated clothing. Immediately wash with plenty of soap and water for at least 15 minutes. Seek medical attention if irritation occurs. Wash clothing before reuse.

Section 5. Fire and Explosion Hazard Data	
Flash Point (Method Used): Closed Cup - 53°F (Ethanol)	Flammable Limits: LEL – 3.3%, UEL – 19%
Extinguishing Media: Use alcohol foam, dry chemical, or carbon dioxide. Water may be ineffective.	
Protective Equipment: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks, or flames. Firefighters should wear protective equipment and self-contained breathing apparatus.	

Unusual Fire and Explosion Hazards: During heating or in case of fire, poisonous gases are produced. Containers may explode in the heat of a fire.

Section 6. Accidental Release Measures

Personal Precautions: Shut off all sources of ignition, ventilate spill area. Wear suitable protective clothing, gloves, and eye protection. Wear self-containing breathing apparatus, rubber boots, and heavy rubber gloves. Place contaminated material in a chemical waste container.

Environmental Precautions: Prevent dispersion of material.

Clean-up Methods: Contact safety officer if questions arise and ventilate area. A vapor suppressing foam may be used to reduce vapors.

Section 7. Handling and Storage

Handling: Protect against physical damage. Ensure good ventilation / exhaustion and do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Do not use if skin is cut or scratched.

Storage: Keep container tightly closed. Keep away from heat, sparks, flame and incompatible material. Storage area should be cool, dry, and away from incompatible materials. Containers of this material may be hazardous when empty since they retain product residues. Do not store near perchlorates, peroxides, chromic acid or nitric acid.

Other Precautions: Keep respiratory protective device available.

Section 8. Exposure Controls / Personal Protection

Components with limit values that require monitoring:

Ethanol (64-17-5), **Natural Gas Condensate** (68919-39-1), **Benzene** (71-43-2)

OSHA-PEL: 1,000 ppm TWA (Ethanol), 500 ppm TWA (Natural Gas Condensate) 1 ppm TWA (Benzene)	TLV: 1,000 ppm (Ethanol)
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Additional Information: Personal Protection listed below are general requirements for laboratory personnel. Follow the usual precautionary measures for handling chemicals / powder. Avoid contact with eyes, skin, and clothing. In the event of use above flash point, use in closed systems. Do not use compressed air by filling, discharging or handling the product. Proper ventilation require, following 29 CFR 1910.133. Safety shower and eye bath. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment:

Keep away from food, beverages, and feed.

Wash hands before and after entering laboratory.

Breathing Equipment: In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respiratory.

Hand Protection: Use chemical resistant gloves.

Eye Protection: Wear safety glasses.

Body Protection: Wear lab coat or other protective work clothing.

Section 9. Physical and Chemical Properties

Appearance and Odor: Clear liquid, petroleum/alcohol like odor.

Boiling Point: 158°F (Ethanol)

Vapor Pressure: 45 mm Hg @ 68°F

Vapor Density: 1.6

Section 10. Stability and Reactivity

Stability:	Unstable		
	Stable	X	Conditions to Avoid: Avoid heat, sources of ignition, moisture, shock, and friction.

Incompatibility (Materials to Avoid): Incompatible with strong oxidizing agents, ammonia, alkali materials, acid anhydrides, and strong bases.

Hazardous Decomposition or Byproducts: Carbon dioxide, Carbon monoxide, irritating and toxic fumes and gases.

Hazardous Polymerization:	May Occur		Conditions to Avoid: Incompatible materials, ignition sources, excess heat, oxidizers.
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Will Not Occur	X
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Section 11. Toxicological Information

LD/LC50 values that are relevant: LD₅₀: ORL-RAT, 7,060 mg/kg (Ethanol), ORL-RAT, 930 mg/kg (Benzene) (100%)

Carcinogenicity Classification:

ACGIH (American Conference of Governmental Industrial Hygienists) – Benzene - A1

NTP (National Toxicology Program) - Not Listed

Eye: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury.

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.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma.

Skin: Causes moderate skin irritation.

Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic exposure to Benzene (at 100% concentration, this product contains 0.13%) has known carcinogen effects. May cause reproductive and fetal effects.

Additional toxicological information: Flammable.

Section 12. Ecological Information

Ecotoxicity Tests: Depending upon the concentration and species of aquatic life, may have toxic effects.

Section 13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with all applicable federal (40 CFR 261.3), state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material if questions arise.

Container Information: Do not remove labels from containers until they have been cleaned.

Section 14. Transport Information

DOT Regulations:

Hazard Class: 3

Identification Number: UN 1170

Packing Group: II

Proper Shipping Name: Ethanol

Remarks: Excepted/Limited quantity.

Land Transport ADR/RID (cross-border):

Hazard Class: 3

Identification Number: UN 1170

Packing Group: II

Proper Shipping Name: Ethanol

Remarks: Excepted/Limited quantity.

Maritime Transport IMDG:

Hazard Class: 3

Identification Number: UN 1170

Packing Group: II

Proper Shipping Name: Ethanol

Remarks: Excepted/Limited quantity.

Air Transport ICAO-TI and IATA-DGR:

Hazard Class: 3

Identification Number: UN 1170

Packing Group: II

Proper Shipping Name: Ethanol

Remarks: Excepted/Limited quantity.

Section 15. Regulatory Information

EU Regulations, Hazard Symbol(s):

Ethanol: F (Flammable)

Natural Gas Condensate: F (Flammable)

Benzene: F (Flammable), T (Toxic)

Risk Phrases:

R 11, Highly flammable.

R 22, Harmful if swallowed.

R 38, Irritating to skin.

R 41, Risk of serious damage to eyes.

R 45, May cause cancer.

Safety Phrases:

S 7 / 16, Keep container tightly closed. Keep away from sources of ignition, no smoking.

S 26, In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 46, If swallowed, seek medical advice immediately.

Section 16. Other Information

This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Neogen Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY.