

MATERIAL NAME: Ethanol (200 Proof) with Denatonium Benzoate		SDS # RNE-02
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SAFETY DATA SHEET

SECTION 1 ♦ IDENTIFICATION

Ringneck Energy & Feed, LLC. 901 Redwood Ave Onida, SD 57564	FOR EMERGENCY SOURCE INFORMATION CONTACT: ♦ General and Manufacturer: 605-945-6900	
GHS PRODUCT IDENTIFIER: Ethanol (200 proof) with Denatonium Benzoate Product Code: None	CHEMICAL FAMILY: Alcohols	PRODUCT USES: Hand Sanitizer



SECTION 2 * HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Flammable Liquid - Category 2	Acute Toxicity (oral) - Category 4	Skin corrosion / irritation - Category 3
Specific Target Organ Toxicity Single Exposure - Category 3	Acute hazards to the aquatic environment - Category 3	
Chronic hazards to the aquatic environment - Category 3	Serious eye damage / eye irritation - Category 2A	

GHS LABEL ELEMENTS

Ethanol with Denatonium Benzoate

GHS PICTOGRAMS		SIGNAL WORD
		DANGER

HAZARD STATEMENTS

Highly Flammable liquid and vapor	Harmful if swallowed	Harmful if contact with the skin
Causes mild skin irritation	Causes serious eye irritation	May cause respiratory irritation
May cause drowsiness or dizziness	Harmful to aquatic life	

PRECAUTIONARY STATEMENTS

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed.		
Ground/bond container and receiving equipment.	Use only non-sparking tools.	
Use explosion-proof electrical/ ventilating/ lighting/equipment.		
Take precautionary measures against static discharge.	Keep out of reach of children	
Wear protective gloves/protective clothing/eye protection/face protection.		
Wash hands and forearms thoroughly after handling.	Obtain special instructions before use.	
Do not breathe mist/vapors/spray.	Use only outdoors or in well-ventilated area.	
Do not eat, drink or smoke when using this product.	Avoid release to the environment.	
Do not handle until all safety precautions have been read and understood.	Keep cool	

Response

In case of fire: Evacuate area, stop leak if safe to do so, use proper fire-extinguishers (alcohol-resistant foam, dry powder, or CO ₂) to extinguish
IF exposed or concerned: Get medical advice/attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or doctor/physician if you feel unwell.

Get medical advice/attention if you feel unwell.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

<i>Storage</i>		
Store in a well-ventilated place	Keep cool and Store locked up	Keep container tightly closed

<i>Disposal</i>		
Dispose of contents/container in accordance with local/regional/national/international regulations.		

SUPPLIER INFORMATION		
Ringneck Energy & Feed, LLC.	901 Redwood Avenue	Onida, SD 57564

SECTION 3 ▼ COMPOSITION/INFORMATION OF INGREDIENTS

INGREDIENT	CAS NUMBER	PERCENTAGE (%)
Ethanol	64-17-5	~99.5
Ethanol Denatonium	3734-33-6	<1

SECTION 4 + FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids, Get Medical Aid.

SKIN: Quickly remove contaminated clothing and immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

INGESTION: Do not induce vomiting. Call a physician and/or transport to an emergency facility immediately.

INHALATION: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give cardiopulmonary resuscitation. If breathing is difficult, give medical oxygen.

NOTE TO PHYSICIAN: TREAT SYMPTOMATICALLY AND SUPPORTIVELY

SECTION 5 ⌘ FIRE-FIGHTING MEASURES

SEE SECTION 9 FOR FLAMMABILITY PROPERTIES

EXTREMELY FLAMMABLE! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, these vapors can burn in the open or explode in confined spaces. Being heavier than air, flammable vapors may travel long distances along the ground before reaching a point of ignition and flashing back.

SUITABLE EXTINGUISHING MEDIA: Water fog, dry chemical, foam, or Carbon Dioxide. Use water spray to cool nearby containers and structure exposed to fire. Water fog or spray are of value in cooling tanks and containers but may not achieve extinguishment.

HAZARDOUS REACTIONS/DECOMPOSITION: Burning or excessive heating may produce carbon monoxide and carbon dioxide, also other harmful gases/vapors including oxides and/or other compounds of chlorine, manganese, and bromine.

SPECIAL PROTECTIVE ACTIONS FOR FIREFIGHTERS: For fires involving this material, do not enter any enclosed or confined space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of combustion products and oxygen deficiencies. If firefighters cannot work upwind of the fire, respiratory protective equipment must be worn. Cool tanks and containers exposed to fire with water. Burning liquid will float on water. Notify appropriate authorities if liquid enters sewer/waterways.

SECTION 6 ❖ ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Use personal protective equipment. All equipment used when handling the product must be grounded. Ensure adequate ventilation. Take precautionary measures against static discharges. Keep people away from and upwind of spill/leak. Stop leak if you can do so without risk.
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METHODS FOR CONTAINMENT	A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Dike far ahead of liquid spill for later disposal.
METHODS FOR CLEANING UP	Use clean non-sparking tools to collect absorbed material. Dike far ahead of liquid spill for later disposal.
OTHER INFORMATION	Water spray may reduce vapor but may not prevent ignition in closed spaces.

SECTION 7 ✂ HANDLING AND STORAGE

Prior to working with this product workers should be trained on its proper handling and storage

PRECAUTIONS FOR SAFETY HANDLING	<ul style="list-style-type: none"> ➤ Do not siphon by mouth. ➤ Handle as a flammable liquid. ➤ Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion. ➤ Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out of Static, Lightning and Stray Currents."
STORAGE PROCEDURES	<ul style="list-style-type: none"> ➤ Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. ➤ Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. ➤ Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". ➤ Avoid storage near incompatible materials.
INCOMPATIBILITIES	<ul style="list-style-type: none"> ➤ Keep away from strong oxidizers.

SECTION 8 # EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH TLV (2019)	OSHA PEL	NIOSH IDLH
Ethanol	STEL: 1,000 ppm	TWA: 1,000 ppm	3,300 ppm
Denatonium benzoate *	None	None	None

* Note: the Denatonium benzoate manufacturer has developed an in-house guideline of 0.1 mg/M³ as a TWA

ENGINEERING CONTROLS: Use adequate ventilation to keep vapor concentrations of this product below occupational exposure limits and flammability limits, particularly in confined areas.

PERSONAL PROTECTIVE EQUIPMENT

- **EYES:** Eye protection (ANSI Z87.1 approved) should be worn whenever there is a likelihood of misting or splashing/spraying liquid. Suitable eyewash station should be available. Contact lenses must not be worn.
- **SKIN/BODY:** Chemical protective clothing is recommended based on a thorough PPE hazard assessment. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for specific information.
- **HAND PROTECTION:** Gloves constructed of nitrile, neoprene, or PVC are recommended. Consult manufacturer specifications for specific information.
- **RESPIRATORY PROTECTION:** A NIOSH approved air purifying respirator (APR) with properly selected cartridges may be permissible under certain circumstances where airborne concentrations may exceed exposure limits. Protection provided by APRs is limited, calculate the maximum use concentration for the exposure situation.

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Use a positive pressure air supplied (Grade D breathing air) respirator if there is any potential for an uncontrolled release, exposure levels are not known or any other circumstances where APRs may not provide adequate protection.

➤ **OTHER HYGIENIC AND WORK PRACTICES:** Use good personal hygiene practices. In case of skin contact, wash with mild soap and water or a waterless hand cleaner. Immediately remove soaked clothing and wash thoroughly before reuse.

SECTION 9 ⚡ PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (760 MM HG): ~173 °F (~78.3 °C) to ~241 °F (~116 °C)	PERCENT VOLATILE BY VOLUME: 100%
SPECIFIC GRAVITY (H₂O = 1): 0.79 at 20 °C	VISCOSITY UNITS, TEMP: Unavailable
EVAPORATION RATE (BuAc = 1): 2.3	VAPOR DENSITY (AIR =1): 1.6-1.7
VAPOR PRESSURE AT 20 °C: ~44 mm Hg	SOLUBILITY IN WATER: Complete
APPEARANCE AND ODOR: Clear colorless liquid, with Mild alcohol odor.	
FLASH POINT: (ASTM D56) 61 °F (16.1 °C)	FLAMMABLE LIMITS: LEL: 1.2% UEL: 19%
AUTOIGNITION TEMPERATURE: Unavailable	VOC CONTENT: 100%

SECTION 10 ☒ STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal temperatures and pressures
HAZARDOUS REACTION POTENTIAL: Will not occur
CONDITIONS TO AVOID: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.
INCOMPATIBLE PRODUCTS: Keep away from strong oxidizers.
MATERIALS TO AVOID: Contact with strong acids/oxidizer.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).
HAZARDOUS POLYMERIZATION: Has not been reported
OTHER PHYSICAL AND CHEMICAL PROPERTIES: None Reported

SECTION 11 ☠ TOXICOLOGICAL INFORMATION

ETHANOL

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. Long term exposure may cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects. Prolonged exposure may cause liver, kidney, and heart damage.

TOXICITY

Type of Dose	Specie	Result	Type of Dose	Specie	Result	Type of Dose	Specie	Result
LD ₅₀ (oral)	Rat	7.06 g/kg	LD ₅₀ (dermal)	Rabbit	No Data	LC ₅₀ (inh)	Rat (10 hours)	20,000 ppm

Specific organ toxicity, single exposure: No data available

Specific organ toxicity, repeated exposure: Liver damage

CARCINOGENICITY

IARC	Not Listed
NTP	Not Listed

California (Prop 65): Not Listed as carcinogen	NIOSH: Not Listed	ACGIH: Not Listed	OSHA: Not Listed
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MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

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Respiratory or Skin sensitization: No data available	Germ cell mutagenicity: No data available
Reproductive toxicity: Human oral effects on newborn including retardation and addiction	Teratogenicity: No data available
Skin Corrosion/irritation: Skin-rabbit: skin irritation	Serious eye damage, irritation-rabbit: mild eye irritation, Draize Test
Synergistic effects: No data available	Aspiration hazard: No data available
RTECS #: KQ6300000	

DENATONIUM BENZOATE

When ingested at 10 ppm by human beings, denatonium benzoate has an extremely bitter, unpleasant taste.

TOXICITY

Type of Dose	Specie	Result	Type of Dose	Specie	Result	Type of Dose	Specie	Result
LD ₅₀ (oral)	Rat	584 mg/kg	LD ₅₀ (dermal)	Rat	>2000 mg/kg	LC ₅₀ (inh) 4 Hours	Rat (10 hours)	200 mg/M ³

Specific organ toxicity, single exposure: No data available

Specific organ toxicity, repeated exposure: Liver damage

CARCINOGENICITY

IARC	Not Listed
NTP	Not Listed
California (Prop 65): Not Listed as carcinogen	NIOSH: Not Listed
	ACGIH: Not Listed
	OSHA: Not Listed

MUTAGENICITY, TERATOGENICITY AND REPRODUCTIVE EFFECTS

Respiratory or Skin sensitization: No data available	Germ cell mutagenicity: No data available
Reproductive toxicity: No data available	Teratogenicity: No data available
Skin Corrosion/irritation: Skin-rabbit: No data available	Serious eye damage, irritation-rabbit: No data available
Synergistic effects: No data available	Aspiration hazard: No data available

SECTION 12 * ECOLOGICAL INFORMATION

ETHYL ALCOHOL

TOXICITY

Type of Dose	Specie	Result	Type of Dose	Specie	Result
LC ₅₀	Rainbow trout	12.9 g/L 96 Hours	EC ₅₀	Water Flea	9.2 g/L 48 Hours
EC ₅₀	Green algae	No Data	EC ₅₀	Microtox	34.6 g/L 30 minutes

Log P_{ow}

No Data

DENATONIUM BENZOATE

TOXICITY

Type of Dose	Specie	Result	Type of Dose	Specie	Result
LC ₅₀	Fathead minnow	>1,000 mg/L 96 hours	EC ₅₀	Water Flea	13 mg/L 48 Hours
EC ₅₀	Green algae	No Data	EC ₅₀	Microtox	No Data

BIOACCUMULATIVE POTENTIAL

Log P_{ow}

No Data

BCF

No Data

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SECTION 13 * DISPOSAL CONSIDERATIONS

Not Meant to Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Maximize product recovery for reclaim and reuse. Implement waste minimization principles. EPA U.S. Waste Codes: "Ignitable hazardous waste" (D001), unless proven otherwise. Use approved treatment, transporters, and disposal sites in compliance with all laws.


Waste Disposal Method: Should not be released into the environment.

Contaminated Packaging: Dispose of in accordance with local regulations.

US EPA Waste Number: D001

SECTION 14 ☐ TRANSPORTATION INFORMATION

Not Meant To Be All Inclusive - Check Local, State, And Federal Laws And Regulations

Element	U.S. DOT	IMDG	IATA
UN Number	UN 1170	UN 1170	UN 1170
UN Proper Shipping Name	Ethanol	Ethanol	Ethanol
Hazard Class	3	3	3
Placard/Label			
Environmental Hazard	No	No	No
Packing Group	II	II	II

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SECTION 15) REGULATORY INFORMATION

Agency	Listing Guidance only, consult specific regulations
OSHA	All ingredients are listed as hazardous under 29 CFR 1910.1200
CERCLA RQ's (40 CFR Part 102)	None of the ingredients are listed
TSCA 8(a)	All components are listed or exempted
TSCA 8(b)	All components are listed or exempted
SARA (40 CFR Part 355) TPQ's	None of the ingredients are listed
SARA 302/304/311/312 extremely hazardous substances	None of the ingredients are listed
SARA 302/304 emergency planning and notification	None of the ingredients are listed
SARA 302/304/311/312 hazardous chemicals	None of the ingredients are listed
RCRA	None of the ingredients are listed
State Regulations: Massachusetts, New Jersey, New York and Pennsylvania	All ingredients are listed
SARA 313 - EPA Toxics Release Inventory	None of the ingredients are listed

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SARA 311/312 SDS distribution - chemical inventory - hazard identification	Fire: Yes Pressure generating: No Reactivity: No Acute: Yes Chronic: Yes
EPA Form R Toxic Chemical Release Inventory	None of the ingredients are listed
Clean Water Act (CWA) 307	None of the ingredients are listed
Clean Water Act (CWA) 311	None of the ingredients are listed
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs)	Listed
Clean Air Act Section 602 Class I Substances	Not Listed
Clean Air Act Section 602 Class II Substances	Not Listed

SECTION 16 ☒ OTHER INFORMATION

 <p>NFPA LABEL</p>	 <p>HMIS III LABEL</p> <p><u>Personal Protection Index</u> NPCA recommends that PPE codes be determined by the employer, who is familiar with the actual conditions under which chemicals in the facility are used.</p>
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Acronym List

°F=degrees Fahrenheit	°C=degrees Celsius	ACGIH= American Conference of Industrial Hygienists
APR=Air Purifying Respirator	BCF= Bioconcentration Factor	BuAc=Butyl Acetate
CANUTEC= Canadian Transport Emergency Centre	CAS=Chemical Abstract Service	CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act
CHEMTREC= Chemical Transportation Emergency Center	CNS=Central Nervous System	CWA=Clean Water Act
DOT=Department of Transportation	EC50= Effective Concentration Fifty	EPA=Environmental Protection Agency
g/Kg=Grams per Kilogram	g/M ³ =Grams per Cubic Meter	GHS=Global Harmonization System
H ₂ O=Water	HAP=Hazardous Air Pollutants	HMIS= Hazardous Materials Identification System
IARC= International Agency for Research on Cancer	IATA= International Air Transport Association	IMDG= International Maritime Dangerous Goods
LC ₅₀ =Lethal Concentration Fifty	LD ₅₀ =Lethal Dose Fifty	LEL=Lower Explosive Limit
Log P _{ow} =Octanol/water partition coefficient	mg/Kg=Milligrams per Kilogram	mg/L=Milligrams per Liter
mL/Kg=Milliliters per Kilogram	mm HG=millimeters of mercury	NFPA=National Fire Protection Association
NIOSH= National Institute for Occupational Safety and Health	NTP=National Toxicology Program	OSHA=Occupational Safety and Health Administration

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PEL=Permissible Exposure Limit	ppm=Parts per Million	RCRA=Resource Conservation and Recovery Act
RQ=Reportable Quantities	RTECS=Registry of Toxic Effects of Chemical Substances	REL=Recommended Exposure Limit
SARA= Superfund Amendments and Reauthorization Act	SDS=Safety Data Sheet	SETIQ= Emergency Transportation System for the Chemical Industry; Mexico
STEL=Short Term Exposure Limit	TLV=Threshold Limit Value	TPQ=Threshold Planning Quantity
TSCA=Toxic Substance and Control Act	TWA=Time Weighted Average	UEL=Upper Explosive Limit
VOC=Volatile Organic Compounds		

SDS REVISIONS:	
SDS CREATION DATE: <u>04/16/20</u>	REVISION #0: <u>04/16/20</u>

DISCLAIMER

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