



Safety Data Sheet

Denatured Ethanol

SECTION 1 IDENTIFICATION

Product Name: Denatured Ethanol

Synonyms: CDA-20-200 proof

SDS #: F1.3

Product Use:

Restrictions on Use: Use only as directed

Manufacturer:

Sinclair Oil Company
P.O. Box 30825
Salt Lake City, Utah 84130

Telephone: **General Information:** (801) 524-2777 **Fax:** (801) 524-2740

Contact person: Jeremiah Webster

Emergency Telephone: 800-424-9300 (CHEMTREC) or (703) 527-3887

SDS Date of Preparation: April 16, 2015

SECTION 2: HAZARDS IDENTIFICATION

Classification:

Physical	Health
Flammable Liquid Category 2	Eye Irritation Category 2 Carcinogen Category 1A Germ Cell Mutagenicity Category 1B

Label Elements:

Danger!



Hazard Phrases:

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause cancer.

May cause genetic defects.

Precautionary Phrases:

Prevention

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical, ventilating and lighting equipment.

Use only non-sparking tools.
Take precautionary measures against static discharge.
Wash thoroughly after handling.
Wear protective gloves and eye protection.

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
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 attention.
IF exposed or concerned: Get medical attention.
In case of fire: Use water fog, foam, carbon dioxide, or dry chemical to extinguish.

Storage and Disposal

Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents and container in accordance with local and national regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Chemical name	CAS No.	Concentration
Ethanol	64-17-4	>94%
Natural Gasoline	68425-31-0	1-5%
Benzene	71-43-2	0-0.25

SECTION 4 EMERGENCY and FIRST AID PROCEDURES

Eye Contact: Immediately flush eyes with water for several minutes. Get medical attention if irritation persists.

Skin Contact: Remove contaminated clothing and flush skin with water for several minutes. Wash thoroughly with soap and water. Get medical attention if irritation develops or persists. Launder clothing before reuse. Discard contaminated shoes.

Inhalation: Remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.

Ingestion: Do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconsciousness person. Get medical attention.

Most important symptoms/effects, acute and delayed: May cause eye irritation. Causes skin irritation with redness and drying. Inhalation may cause respiratory irritation and central nervous system effects. Harmful or fatal if swallowed. Aspiration during swallowing or vomiting may cause lung damage. May cause cancer. May cause genetic defects.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is required for ingestion.

SECTION 5 FIRE and EXPLOSION HAZARD DATA

Suitable extinguishing media: Use water fog, alcohol foam, carbon dioxide, or dry chemical. Do not use a steady stream of water. Product may float on the surface of water and create a floating fire hazard.

Specific hazards arising from the chemical: This product is highly flammable and forms explosive mixtures with air. Vapors are heavier than air and will travel along surfaces to remote ignition sources and flash back. Closed containers may explode if exposed to extreme heat. Combustion may produce carbon oxides and other products of incomplete combustion.

Special protective equipment and precautions for fire-fighters: Firefighters should wear full emergency equipment and a NIOSH approved positive pressure self-contained breathing apparatus. Cool fire exposed container with water. Do not allow run-off from firefighting to enter drains or water courses.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Wear appropriate protective equipment. Eliminate ignition sources and ventilate the area with explosion proof equipment. Wash thoroughly after handling.

Environmental hazards: Avoid release into the environment. Report spill as required by local and federal regulations.

Methods and materials for containment and cleaning up: **Contain** with an inert absorbent and place into a closable container for disposal. Use non-sparking tools and equipment. If spill has not ignited, use water spray to disperse the vapors and protect personnel attempting to stop leak. Prevent entry in storm sewers and waterways. Runoff can cause a fire or explosion hazard in sewers.

SECTION 7 HANDLING and STORAGE

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Wash thoroughly after handling. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep product away from heat, sparks, flames and all other sources of ignition. Do not permit smoking in use or storage areas. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer

Do not cut, drill, grind or weld on or near containers, even empty containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers.

Refer to OSHA 1910.1028 for requirements for handling and use of benzene.

Conditions for safe storage, including any incompatibilities: Store in accordance with regulations for the storage of flammable liquids. Store in a dry, well ventilated area away from heat, direct sunlight and all sources of ignition. Store away from oxidizers and other incompatible materials. Protect containers from physical damage.

SECTION 8 EXPOSURE CONTROLS and PERSONAL PROTECTION

Exposure Guidelines:

INGREDIENTS

Ethanol

Natural Gasoline (as gasoline)

Benzene

EXPOSURE LIMITS

1000 ppm TWA OSHA PEL

1000 ppm STEL ACGIH TLV

300 ppm TWA , 500 ppm STEL ACGIH TLV

1 ppm TWA, 5 ppm STEL OSHA PEL

0.5 ppm TWA, 2.5 ppm STEL ACGIH TLV

29 CFR 1910.1028 is the OSHA regulation on Occupational Exposure to Benzene. Assure compliance with these regulations.

Appropriate engineering controls: Use with local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required

Respiratory protection: If exposures are exceeded, use a NIOSH approved organic vapor respirator appropriate for the form and concentration of the contaminants should be used. Selection of respiratory protection depends on the contaminant type, form and concentration. Select in accordance with OSHA 1910.134 and good Industrial Hygiene practice.

Skin protection: Impervious gloves such as viton recommended to prevent skin contact.

Eye protection: Wear chemical safety goggles to avoid eye contact.

Other: Impervious coveralls, apron and boots is required to prevent skin contact and contamination of personal clothing. A safety shower and eye wash should be available in the immediate work area.

SECTION 9 PHYSICAL and CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Clear, colorless liquid

Odor: Mild fragrant odor.

Odor threshold: 0.136 ppm (ethanol)	pH: Not applicable
Melting point/Pourpoint: -173.5°F (-114.14°C)	Boiling Point: 173.3° F (78.5°C)
Flash point: 49°F (9.4°C)	Evaporation rate: 1.9 (n-butyl acetate =1)
Flammability (solid, gas): Not applicable	
Flammable limits: LEL: 3.3%	UEL: 19%
Vapor pressure: 43.9 mmHg @ 20°C	Vapor density: 1.59
Relative density: 0.793	Solubility: Infinite in water
Partition coefficient: n-ctanol/water: Not available	Auto-ignition temperature: 685°F 363°C) (ethanol
Decomposition temperature: Not available	Viscosity: Not applicable

SECTION 10 STABILITY and REACTIVITY

Reactivity: This product is not expected to be reactive.

Chemical stability: The product is stable.

Possibility of hazardous reactions: None known.

Conditions to avoid: Keep away from heat and all sources of ignition.

Incompatible materials: Avoid oxidizing agents, acids, alkalies and halogens.

Hazardous decomposition products: Thermal decomposition may yield carbon oxides and other products of incomplete combustion.

SECTION 11 TOXICOLOGICAL INFORMATION

Health Hazards:

Inhalation: Inhalation of vapors may cause mucous membrane and respiratory irritation and central nervous system depression with symptoms of headache, dizziness, giddiness, intoxication, nausea, vomiting, disorientation, stupor and unconscious.

Skin Contact: Prolonged skin contact may cause irritation, drying and defatting of the skin.

Eye Contact: Eye contact may cause irritation with redness, tearing and pain.

Ingestion: Ingestion may cause mucous membrane and gastrointestinal irritation and nervous system depression with symptoms of headache, dizziness, nausea, vomiting, weakness, fatigue, restlessness, confusion, drunken behavior, narcosis, and unconsciousness.

Chronic Effects of Overexposure: Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, resulting in fetal alcohol syndrome. Reports have associated repeated and prolonged overexposure to petroleum distillates with adverse liver, kidney and bone marrow effects and with permanent brain and nervous system damage. Benzene has been shown to cause damage to the blood forming system with anemia, leukopenia and thrombocytopenia by all routes of exposure.

Mutagenicity: Benzene did not induce in vitro mutation in bacteria using standard AMES test conditions. Mammalian cell gene mutation tests carried out in various human, mouse and Chinese hamster cells resulted in mixed results. Benzene is an in vivo mutagen in mammals, especially when chromosomal aberrations and micronuclei are induced. It has been reported that benzene exposure in humans induces genotoxic effects in lymphocytes in vivo.

Reproductive Toxicity: Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, resulting in fetal alcohol syndrome. These effects include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders and small head size.

Carcinogenicity: Benzene is listed by IARC as "Carcinogenic to Humans" Group 1, by NTP as "Known to Be a Human Carcinogen" and as a "Confirmed Human Carcinogen", A1 by ACGIH. None of the other components are listed as carcinogens by IARC, NTP, or OSHA.

Acute Toxicity Values: Acute Toxicity Estimate: Oral 14492 mg/kg
Natural Gasoline: Oral rat LD50 >5000 mg/kg, Inhalation rat LC50 >5.61 mg/L/4 hr, Dermal rabbit LD50 >2000 mg/kg
Ethanol: Oral rat LD50 10470 mg/kg, Inhalation rat LC50 124.7 mg/L/4 hr
Benzene: Oral rat LD50 >2000 mg/kg, Inhalation rat LC50 41.69 mg/L/4 hr, Dermal rabbit LD50 > 8260 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Ethanol: 96 hr LC50 Pimephales promelas 14200 mg/kg, 48 hr EC50 Ceriodaphnia dubia 5012 mg/L, 72 hr EC50 Chlorella vulgaris 275 mg/L

Gasoline: 96 hr LL50 Pimephales promelas 8.2 mg/kg, 48 hr EL50 4.5 mg/L, 72 hr EL50 Pseudokirchnerella subcapitata 3.1 mg/L

Benzene: 96 hr LC50 Oncorhynchus mykiss 5.3 mg/L, 48 hr EC50 daphnia magna 10 mg/L, 72 hr EC50 Pseudokirchnerella subcapitata 32 mg/L

Persistence and degradability: Ethanol is readily biodegradable. Gasoline is inherently biodegradable.

Bioaccumulative potential: Ethanol has a BCF of 3 which suggests the potential for bioaccumulation is low.

Mobility in soil: Ethanol is highly mobile in soil.

Other adverse effects: None known.

SECTION 13: DISPOSAL INFORMATION

Waste Disposal Method: Dispose in accordance with all local, state and federal regulations.

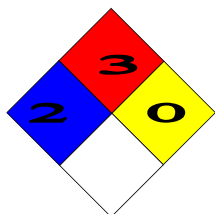
SECTION 16: OTHER INFORMATION

SDS Revision History: Converted to GHS format – all Sections revised

Date of current revision: April 16, 2015

Date of previous revision: February 21, 2013

**National
Fire
Protection
Association
(U.S.A)**



**Health: 2
Flammability : 3
Instability: 0
Specific Hazard:**

Disclaimer: This product material safety data sheet provides health and safety information. The product should be used in applications consistent with this product literature. For any other uses, exposures should be evaluated so that appropriate handling practices and

training programs can be established to ensure safe workplace operations.

This material safety data sheet is provided in good faith and meets the requirements of the hazardous communication provisions of SARA TITLE III and 29 CFR 1910.1200(g) of the OSHA regulations. The above information is based on review of available information Sinclair believes is reliable and is supplied for informational purposes only. Sinclair does not guarantee its completeness or accuracy. Since conditions of use are outside the control of Sinclair, Sinclair disclaims all warranties, express or implied, and any liability for damage or injury which results from the use of the above data. Nothing herein is intended to permit infringement of valid patents and licenses.