



SAFETY DATA SHEET

SDS ID NO.: 0153MAR019
Revision Date: 06/01/2015

1. IDENTIFICATION

Product Name: Marathon Petroleum Denatured Alcohol
Synonym: Denatured Alcohol, Marathon
Chemical Family: Alcohol
Recommended Use: Fuel additive.
Use Restrictions: All others.

Supplier Name and Address:
MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information: 1-419-421-3070
Emergency Telephone: 1-877-627-5463

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive toxicity	Category 2
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

Hazards Not Otherwise Classified (HNOC)

Not applicable

Label elements

EMERGENCY OVERVIEW

Danger

HIGHLY FLAMMABLE LIQUID AND VAPOR
Causes serious eye irritation
May cause genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child

Harmful to aquatic life with long lasting effects



Appearance Colorless Liquid

Physical State Liquid

Odor Very faint. Alcoholic

Precautionary Statements - 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/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wash hands and any possibly exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection
 Avoid release to the environment

Precautionary Statements - Response

IF exposed or concerned: Get medical attention
 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 ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

Precautionary Statements - Storage

Store in a well-ventilated place. Keep cool
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Denatured Alcohol is a mixture of ethyl alcohol and natural gasoline that is approved for use as an octane-enhancing blending component in gasoline.

Composition Information:

Name	CAS Number	Weight %
Ethyl Alcohol	64-17-5	97.5-98
Natural Gasoline	8006-61-9	1.9-2.5

4. FIRST AID MEASURES

First Aid Measures

General advice

In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation:

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. Get medical attention if cough or other respiratory symptoms develop.

- Skin Contact:** Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation persists. Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties.
- Eye Contact:** Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. GET IMMEDIATE MEDICAL ATTENTION.
- Ingestion:** Do not induce vomiting. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Most important signs and symptoms, both short-term and delayed with overexposure

- Adverse Effects:** Acute: May cause severe eye irritation. Symptoms may include stinging, tearing, redness, and swelling. Delayed: Dry skin and possible irritation with repeated or prolonged exposure.

Indication of any immediate medical attention and special treatment needed

- NOTES TO PHYSICIAN:** INGESTION: Aspiration into lungs may cause chemical pneumonia and lung damage. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media

Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product has been determined to be a highly flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 127.

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.

Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Flame is invisible in daylight. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

NFPA: Health 2 Flammability 3 Instability 0 Special Hazards -

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.
Protective Equipment:	Use personal protection measures as recommended in Section 8.
Emergency Procedures:	Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
Environmental precautions:	Avoid release to the environment. Avoid subsoil penetration.
Methods and materials for containment:	Contain liquid with sand or soil.
Methods and materials for cleaning up:	Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded.

7. HANDLING AND STORAGE

Safe Handling Precautions:	Use appropriate grounding and bonding practices. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking. Avoid contact with eyes. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Use only non-sparking tools. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.
Storage Conditions:	Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area.
Incompatible materials	Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELs:	OSHA - Vacated PELs	NIOSH IDLH
Ethyl Alcohol 64-17-5	1000 ppm STEL	TWA: 1000 ppm TWA: 1900 mg/m ³	1000 ppm TWA 1900 mg/m ³ TWA	3300 ppm
Natural Gasoline 8006-61-9	-	-	300 ppm TWA 900 mg/m ³ TWA 500 ppm STEL 1500 mg/m ³ STEL	-

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection:	When contact is possible, wear safety glasses with side shields.
Skin and body protection:	Use nitrile rubber, viton or PVA gloves for repeated or prolonged skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.
Respiratory protection:	Approved organic vapor chemical cartridge or supplied air respirators should be worn when significant vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless Liquid
Color	Colorless
Odor	Very faint. Alcoholic
Odor Threshold	No available data.

<u>Property</u>	<u>Values (Method)</u>
Melting Point / Freezing Point	No available data.
Initial Boiling Point / Boiling Range	74-79.5 °C / 165-175 °F
Flash Point	-20 °C / -5 °F
Evaporation Rate	No available data.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%)	
Upper Flammability Limit:	19
Lower Flammability Limit:	3.3
Vapor Pressure	43-47 mm Hg
Vapor Density	1.6
Specific Gravity / Relative Density	0.79
Water Solubility	Appreciable
Solubility in other solvents	No available data.
Partition Coefficient	100%
Decomposition temperature:	No available data.
pH:	Not applicable.
Autoignition Temperature	No available data.
Kinematic Viscosity	No available data.
Dynamic Viscosity	No available data.
Explosive Properties	No available data.
Softening Point	No available data.
VOC Content (%)	No available data.
Density	6.6 lbs/gal
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	The product is non-reactive under normal conditions.
<u>Chemical stability</u>	Stable under recommended storage conditions.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Hazardous polymerization</u>	Will not occur.
<u>Conditions to avoid</u>	Sources of heat or ignition.
<u>Incompatible materials</u>	Strong oxidizing agents.
<u>Hazardous decomposition products</u>	None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation Inhalation of high vapor concentrations may cause irritation of the respiratory system.

Eye contact	Irritating to eyes.
Skin contact	Prolonged or repeated contact may dry skin and cause irritation.
Ingestion	May cause irritation of the mouth, throat and gastrointestinal tract. Aspiration into lungs may result in pneumonitis.

Acute Toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Ethyl Alcohol 64-17-5	> 5000 mg/kg (Rat)	-	124.7 mg/L (Rat) 4 h
Natural Gasoline 8006-61-9	>5000 mg/kg (rat)	> 5 mL/kg (rabbit)	>5000 mg/m ³ (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

ETHANOL: Repeated ingestion of ethanol can result in alcohol abuse, causing behavioral changes, memory loss, impaired judgement, decreased appetite, irregular heartbeats, and decreased fertility. Prolonged and repeated ingestion of ethanol has also been associated with cancers of the mouth, pharynx, esophagus and liver. Ethanol ingestion by pregnant women can cause miscarriage, low birth weight, premature birth and fetal alcohol syndrome. In males, acute and chronic alcohol ingestion may affect gonadal hormone levels. It may also affect the liver, kidney, brain, blood and cardiovascular system.

NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs & Symptoms	Causes eye irritation. Symptoms may include stinging, redness, swelling, tearing, and eye damage. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.
Sensitization	Not expected to be a skin or respiratory sensitizer.
Mutagenic effects	May cause genetic defects.

Carcinogenicity Cancer designations are listed in the table below.

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Ethyl Alcohol 64-17-5	Confirmed animal carcinogen (A3)	Alcoholic Beverages Carcinogenic to humans (1)	Alcoholic Beverage Consumption Known to be human carcinogen	Not Listed
Natural Gasoline 8006-61-9	Not Listed	Possibly carcinogenic to humans(2B)	Not Listed	Not Listed

Reproductive toxicity	Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (STOT) - single exposure	Not classified.

Specific Target Organ Toxicity (STOT) - repeated exposure Not classified.

Aspiration hazard Potential for aspiration if swallowed.

12. ECOLOGICAL INFORMATION

Ecotoxicity This product should be considered harmful to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Ethyl Alcohol 64-17-5	-	96-hr LC50 >1,000 mg/l Rainbow Trout (static) 96-hr LC50 >100 mg/l Fathead minnow (static)	-	48-hr LC50 >1,000 mg/l Daphnia magna
Natural Gasoline 8006-61-9	-	96-hr LC50 = 11 mg/l Rainbow Trout (static)	-	48-hr LC50 = 7.6 mg/l Daphnia magna

Persistence and degradability Readily biodegradable in the environment. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents.

Bioaccumulation Not expected to bioaccumulate in aquatic organisms.

Mobility in soil May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues

This material may be a flammable liquid waste.

Safe Handling of Wastes

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper shipping name:	Denatured Alcohol
UN/Identification No:	NA 1987
Transport Hazard Class(es):	3
Packing group:	II

TDG (Canada):

UN Proper shipping name:	Denatured Alcohol
UN/Identification No:	NA 1987
Transport Hazard Class(es):	3
Packing group:	II

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b):

This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Ethyl Alcohol	NA
Natural Gasoline	NA

SARA Section 304: This product does not contain any component(s) identified as an EHS or a CERCLA Hazardous substance, which in case of a spill or release may be subject to SARA reporting requirements.

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Ethyl Alcohol	NA
Natural Gasoline	NA

SARA: The following EPA hazard categories apply to this product:

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

SARA Section 313: This product does not contain any components, which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Ethyl Alcohol	None
Natural Gasoline	None

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Ethyl Alcohol

Louisiana Right-To-Know:
California Proposition 65:

Not Listed.
Carcinogen, initial date 4/29/11 (in alcoholic beverages)
Carcinogen, initial date 7/1/88 (when associated with alcohol abuse)
Developmental toxicity, initial date 10/1/87 (in alcoholic beverages)

New Jersey Right-To-Know:
Pennsylvania Right-To-Know:
Massachusetts Right-To Know:
Florida Substance List:

SN 0844
Present
Teratogen
Not Listed.

Rhode Island Right-To-Know:

Toxic; Flammable

Michigan Critical Materials Register List:

Not Listed.

Massachusetts Extraordinarily Hazardous Substances:

Not Listed.

California - Regulated Carcinogens:

Not Listed.

Pennsylvania RTK - Special Hazardous Substances:

Not Listed.

New Jersey - Special Hazardous Substances:

Carcinogen; Flammable - third degree; Mutagen; Teratogen

New Jersey - Environmental Hazardous Substances List:

Not Listed.

Illinois - Toxic Air Contaminants

Present

New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.
Natural Gasoline	
Louisiana Right-To-Know:	Not Listed.
California Proposition 65:	Not Listed.
New Jersey Right-To-Know:	Not Listed.
Pennsylvania Right-To-Know:	Not Listed.
Massachusetts Right-To-Know:	Not Listed.
Florida Substance List:	Not Listed.
Rhode Island Right-To-Know:	Toxic; Flammable
Michigan Critical Materials Register List:	Not Listed.
Massachusetts Extraordinarily Hazardous Substances:	Not Listed.
California - Regulated Carcinogens:	Not Listed.
Pennsylvania RTK - Special Hazardous Substances:	Not Listed.
New Jersey - Special Hazardous Substances:	Not Listed.
New Jersey - Environmental Hazardous Substances List:	Not Listed.
Illinois - Toxic Air Contaminants	Not Listed.
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed.

Canada DSL/NDL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: "This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the (M)SDS contains all the information required by the Controlled Products Regulations."

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Ethyl Alcohol	B2,D2B	0.1%
Natural Gasoline	B2,D2A	0.1%



NOTE: Not Applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety
Revision Date: 06/01/2015

Revision Note:

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.