



SAFETY DATA SHEET

Denatured Fuel Grade Ethanol

1. IDENTIFICATION

Product Identifier Denatured Fuel Grade Ethanol

Synonyms: Denatured alcohol, alcohol with natural gasoline

Intended use of the product: Fuel Additive

Contact: Global Companies LLC
Water Mill Center
800 South St.
Waltham, MA 02454-9161
www.globalp.com

Contact Information: EMERGENCY TELEPHONE NUMBER (24 hrs): CHEMTREC (800) 424-9300
COMPANY CONTACT (business hours): 800-542-0778

2. HAZARD IDENTIFICATION

According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Classification (GHS-US):

| | | |
|-------------------|------------|------|
| Flammable Liquid | Category 2 | H225 |
| Eye Irritation | Category 2 | H319 |
| Aspiration Hazard | Category 1 | H304 |

Labeling Elements



Signal Word (GHS-US):

Hazard Statements (GHS-US):

Danger

H225 – Highly flammable liquid and vapor

H319 – Causes serious eye irritation

H304 – May be fatal if swallowed and enters airways.

Precautionary Statements (GHS-US):

P201 - Obtain special instructions before use.

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 - Keep container tightly closed.

P240 – Ground/bond container and receiving equipment.

P241 – Use explosion-proof electrical/ventilating/lighting equipment pursuant to applicable electrical code

P242 – Use only non-sparking tools

P243 – Take precautionary measures against static discharge.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P303+361+353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse with water.

P370+P378 – In case of fire use firefighting foam or other appropriate media for Class B fires to extinguish.



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P403 - Store in a well-ventilated place. Keep cool.
 P405 - Store locked up.
 P501 – Dispose of contents/container in accordance with local/regional/national/international regulation.

Other information:

NFPA 704
 Health:1
 Fire: 3
 Reactivity: 0



3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Composition Information

| Name | Product Identifier (CAS#) | % (w/w) | Classification |
|-------------------------|---------------------------|---------|--|
| Ethyl Alcohol (Ethanol) | 64-17-5 | 98-100 | Flam Liq 2 H225 |
| Gasoline | 68425-31-0 | 2 | Carc 1B, H350; Irr. H319 Flam Liq 2 H225 Aspiration H304 |

Additional Formulation Information

Also see Section 15 for list of SARA Section 313 toxic chemicals.

4. FIRST AID MEASURES

| Route | Measures |
|--------------|---|
| Inhalation | Remove person to fresh air. If person is not breathing, ensure an open airway and provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately. |
| Ingestion | Aspiration Hazard. DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated. |
| Eye Contact | If present, remove contact lenses. In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 minutes. Hold eyelids open to ensure adequate flushing. Seek medical attention. |
| Skin Contact | Remove contaminated clothing and shoes. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. |
| Absorption | As with skin contact, remove contaminated clothing and flush with copious amounts of water. Flush affected area for at least 15 minutes to minimize potential for further absorption. Seek medical attention if significant portions of skin have been exposed. |

Most Important Symptoms

Contact may cause eye, skin and mucous membrane irritation. Harmful if absorbed through the skin. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

Immediate Medical Attention and Special Treatment

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

Application of epinephrine may cause cardiac arrhythmia in persons exposed to large quantities of hydrocarbon vapor or due to skin absorption. Observe for development of symptoms leading to cardiac arrhythmia.



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Contaminated clothing, including shoes may present a fire hazard and should be discarded

Medical Conditions Aggravated by Exposure

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Chronic respiratory disease, liver or kidney dysfunction, or pre-existing central nervous system disorders may be aggravated by exposure.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO₂, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Specific Hazards / Products of Combustion

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. Flowing product may be ignited by self-generated static electricity. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard. Alcohol flames may not be visible.

Combustion may produce smoke, carbon monoxide and other products of incomplete combustion.

Special Precautions and Protective Equipment for Firefighters

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other firefighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full face piece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 9 for fire properties of this chemical including flash point, autoignition temperature, and explosive limits

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

ACTIVATE FACILITY SPCC, SPILL CONTINGENCY or EMERGENCY PLAN.

Depending on the size of the spill, downwind receptors may need to be notified.

Evacuate nonessential personnel and remove or secure all ignition sources (flame, spark, hot work, hot metal, etc.). Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Do not touch or walk-through spilled material.

Highly flammable material, even small spills may pose a fire danger for emergency responders. Due to high vapor density, flammable / toxic vapors may be present in low lying areas, dikes, pits, drains, or trenches. Ventilate the area. Use of non-sparking tools and intrinsically safe equipment is recommended. Potential for flammable atmosphere should be monitored using a combustible gas indicator positioned down wind of the spill area. See Sections 2 and 7 for further hazard warnings and handling instructions.

Use appropriate personal protective equipment to prevent eye/skin contact and absorption. Use NIOSH approved respiratory protection, if warranted, to prevent exposures above permissible limits (see Section 8). Contaminated clothing should not be near sources of ignition.

Environmental Precautions

Stop the spill to prevent environmental release if it can be done safely. Product may be toxic to aquatic life. Take action to isolate environmental receptors including drains, storm sewers and natural water bodies. Keep on impervious surface if at all



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possible. Use water sparingly to prevent product from spreading. Foam and absorbents may be used to reduce / prevent airborne release.

Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Follow federal, state or local requirements for reporting environmental release where necessary (see Section 15 for further information)

Containment and Clean-Up Methods

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with dry earth, sand or other non-combustible, inert absorbing materials. Carefully shovel, scoop or sweep up into a waste container with clean, non-sparking tools for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING AND STORAGE

Handling Precautions

USE ONLY AS A MOTOR FUEL ADDITIVE

DO NOT SIPHON BY MOUTH

Handle as a flammable liquid. Keep away from heat, sparks, and open flame. No smoking. Electrical equipment should be approved for classified area. Bond and ground containers during product transfer pursuant to NFPA 70 and API RP 2003 to reduce the possibility of static-initiated fire or explosion. Follow precautions to prevent static initiated fire.

Use good personal hygiene practices. Use only with protective equipment specified in Section 8. Avoid repeated and/or prolonged skin exposure. Use only outdoors or in well ventilated areas. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure.

Vapors are heavier than air and can accumulate in low lying areas (e.g., tanks, pits, vaults, dikes, drains, etc.) Follow specific procedures for confined space entry in areas where product may be present pursuant to OSHA requirements in 29 CFR 1910.146. Atmospheric testing using a combustible gas indicator may be necessary in confined areas where product may be present.

Storage

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Label all secondary containers that this material is transferred into with the chemical name and associated hazard(s). Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition. Separate from incompatible materials (see Section 10) by distance or secondary containment.

Store in a well-ventilated area. Protect containers from damage and vehicular traffic. Post "No Smoking" signs in product storage areas. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks in Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

| Component | CAS # | List | Value |
|-------------------------|------------|-------------------------|----------------------|
| Gasoline, natural | 68425-31-0 | ACGIH TWA ACGIH STEL | 300 ppm 500 ppm |
| Ethyl Alcohol (Ethanol) | 64-17-5 | ACGIH STEL OSHA PEL | 1000 ppm 1000 ppm |

*Skin designation indicates the chemical is skin absorbable

Engineering Controls

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Intrinsically safe equipment and non-sparking tools shall be used in circumstances where concentrations may exceed lower flammable limits. Grounding and bonding shall be used to prevent accumulation and discharge of static electricity.

Emergency shower and eyewash should be provided in proximity to handling areas in the event of exposure to decontaminate.

Personal Protective Equipment

| Exposure | Equipment |
|-------------|--|
| Eye / Face | Safety glasses or goggles are recommended where there is a possibility of splashing or spraying. |
| Skin | Gloves constructed of nitrile or neoprene are recommended when handling this material. If contact with the body is expected, chemical protective clothing such as of E.I. DuPont Tychem [®] , Barricade [®] , or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information. |
| Respiratory | A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection and limitations. Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection. Specific requirements under the OSHA occupational exposure to Benzene may apply if concentrations exceed the action level or permissible limits. Consult 29 CFR 1910.1028 for further information) |
| Thermal | Product is stored at ambient temperature. No thermal protection is required except for emergency operations involving actual or potential for fire. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Value | Comments | | | | | | | | | |
|-------------------|---|------------------|----------------|------------------|-------------------|-------------|-------------|---------|-------------|-------------|--|
| Appearance | A clear, water-like liquid | | | | | | | | | | |
| Odor | Alcohol or Gasoline-like | | | | | | | | | | |
| Odor Threshold | <table border="1"> <thead> <tr> <th>Parameter</th> <th>Odor Detection</th> <th>Odor Recognition</th> </tr> </thead> <tbody> <tr> <td>Gasoline, natural</td> <td>0.5-0.6 ppm</td> <td>0.8-1.1 ppm</td> </tr> <tr> <td>Ethanol</td> <td>0.2-0.3 ppm</td> <td>0.4-0.7 ppm</td> </tr> </tbody> </table> | Parameter | Odor Detection | Odor Recognition | Gasoline, natural | 0.5-0.6 ppm | 0.8-1.1 ppm | Ethanol | 0.2-0.3 ppm | 0.4-0.7 ppm | |
| Parameter | Odor Detection | Odor Recognition | | | | | | | | | |
| Gasoline, natural | 0.5-0.6 ppm | 0.8-1.1 ppm | | | | | | | | | |
| Ethanol | 0.2-0.3 ppm | 0.4-0.7 ppm | | | | | | | | | |
| pH | Not available | | | | | | | | | | |



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| Property | Value | Comments |
|---------------------------|--|-----------------------|
| Melting / Freeze Point | > -30 °F | |
| Boiling Point And Range | 160-171 °F (71 to 77 °C) | |
| Flash Point | 44.5 °F (7 °C) | |
| Evaporation Rate | 4-8 | (n-butyl acetate = 1) |
| Flammability | Flammable liquid | |
| Flammability Limits | 3-23% | (est) |
| Vapor Pressure | 45 mm Hg @ 70 °F (21 °C) | |
| Vapor Density | 1.6 | |
| Specific Gravity | 0.76-0.9 | (water =1) |
| Solubility | Infinite (denaturant (gasoline) is insoluble in water) | |
| Partition Coefficient | <1 | as Log P |
| Autoignition Temperature | highly variable; >530 °F (>280 C) | |
| Decomposition Temperature | Evaporation or ignition likely before decomposition will occur | |
| Viscosity | <1 cSt | |
| Percent Volatiles | 100% | |

10. STABILITY AND REACTIVITY

Reactivity

Material is not self reacting, flammable concentrations may be present in air.

Stability

Normally stable unless mixed with incompatibles or fire in presence of an ignition source. Material is flammable liquid.

Reactions / Polymerization

Stable. Hazardous polymerization will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources

Incompatible Materials

Keep away from strong acids and oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke). Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:

Acute Toxicity (Inhalation LC50)

Gasoline, natural (68425-31-0)

LC50 Inhalation Human 2000 ppm/1 hr



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Ethanol (64-17-5)
LC50 Inhalation Rat >20,000 ppm/10 hr

Ethanol (64-17-5)
LD50 Oral Rat 7060 mg/kg

Acute Toxicity (Dermal LD50)
Gasoline, natural (68425-31-0)
LD50 Dermal Rabbit >5 mL/kg

Skin Corrosion/Irritation: Causes skin irritation.

Serious Eye Damage/Irritation: Not classified

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: May cause genetic defects.

Carcinogenicity: OSHA: NO IARC: YES - 2B NTP: NO ACGIH: YES (A3)

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.

The IARC has determined that there is sufficient evidence indicating that alcoholic beverages (ethanol) are carcinogenic in humans (Group 1). They have determined that there is inadequate evidence that gasoline is carcinogenic in humans and limited evidence that it is carcinogenic in animals. However, IARC has designated MATERIAL SAFETY DATA SHEET Denatured Fuel Grade Ethanol Page 5 of 6 Revision 04/03/2012 gasoline as possibly carcinogenic to humans (Group 2B) due to the fact that gasoline contains benzene.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. The NTP, ARC, OSHA and ACGIH list benzene as a human carcinogen.

Reproductive Toxicity: May damage/Suspected of damaging fertility or the unborn child.

Teratogenicity: Not available

Specific Target Organ Toxicity (Repeated Exposure): Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

Specific Target Organ Toxicity (Single Exposure): Single over-exposure likely to cause central nervous system effects (dizziness and drowsiness), excessive exposure could cause paralysis or cardiac arrhythmia.

Aspiration Hazard: This chemical is considered to be an aspiration hazard. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Potential Health Effects: Vapor irritating to eyes, nose, and throat. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur. Inhalation at high concentrations in confined spaces with less than 16% oxygen needed to sustain life, skin and /or eye contact (liquid).

Chronic effects: Human inhalation (chronic) >500 ppm (approx. 1.8 mg/L)/ day. Effects: May cause vomiting, diarrhea, insomnia, headache dizziness, anemia, muscle & neurological symptoms.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.



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12. ECOLOGICAL INFORMATION

Toxicity

Material is toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

| | |
|--------------|---|
| EC50 Daphnia | 30 mmol/m ³ (Exposure time: 48 h - Species: Daphnia magna) |
| LC 50 Fish | 7.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas) |

Persistence and Degradation: Not expected to persist in the environment.

Bioaccumulative Potential: Not available

Mobility in Soil: Not available

Other Adverse Effects: None known

Other Information: Avoid release to the environment.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options. May be considered a hazardous waste if disposed. Direct solid waste (landfill) or incineration at a solid waste facility is not permissible. Do not discharge to sanitary or storm sewer. Personnel handling waste containers should follow precautions provided in this document.

Shipping containers must be DOT authorized packages. Follow licensure and regulations for transport of hazardous material and hazardous waste as applicable.

14. TRANSPORT INFORMATION

US DOT

| | |
|---|-------------------|
| UN Identification Number | NA 1987 |
| Proper Shipping Name | Denatured alcohol |
| Hazard Class and Packing Group | 3, PG II |
| Shipping Label | Flammable Liquid |
| Placard / Bulk Package | Flammable |
| Emergency Response Guidebook Guide Number | 128 |

IATA Cargo

| | |
|--------------------------------|----------------------|
| UN Identification Number | UN 1987 |
| Shipping Name / Description | Alcohols, n.o.s. |
| Hazard Class and Packing Group | 3, PG II |
| ICAO Label | Ethanol and Gasoline |
| Packing Instructions Cargo | 364, Y341 |
| Max Quantity Per Package Cargo | 60 L |

IATA Passenger

| | |
|--------------------------------|------------------|
| UN Identification Number | UN 1987 |
| Shipping Name / Description | Alcohols, n.o.s. |
| Hazard Class and Packing Group | 3, PG II |
| ICAO Label | 3 |
| Packing Instructions Passenger | 353, Y341 |
| Max Quantity Per Package | 5 L |

IMDG

| | |
|--------------------------------|------------------|
| UN Identification Number | UN 1987 |
| Shipping Name / Description | Alcohols, n.o.s. |
| Hazard Class and Packing Group | 3, PG II |
| IMDG Label | 3 |
| EmS Number | F-E S-E |
| Marine Pollutant | Yes |



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15. REGULATORY INFORMATION

U.S. Federal, State, and Local Regulatory Information

Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other federal, state, or local regulations; consult those regulations applicable to your facility/operation.

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

| | |
|-----------------------------------|-----|
| Immediate (Acute) Health Hazard | Yes |
| Delayed (Chronic) Health Hazard | Yes |
| Fire Hazard | Yes |
| Reactive Hazard | No |
| Sudden Release of Pressure Hazard | No |

Clean Water Act (Oil Spills)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA Section 103 and SARA Section 304 (Release to the Environment)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA Section 313- Supplier Notification

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372.

- Benzene (71-43-2)
- Ethyl benzene (100-41-4)
- n-Hexane (110-54-3)
- Toluene (108-88-3)
- 1,2,4- Trimethylbenzene (95-63-6)
- Xylene, mixed isomers (1330-20-7)

Information on each ingredient's concentration can be found in Section 3

Information on each ingredient's exposure limits can be found in Section 8

EPA Notification (Oil Spills)

If there is a discharge of more than 1,000-gallons of oil (2%) into or upon navigable waters of the United States, or if it is the second spill event of 42 gallons or more of oil into water within a twelve (12) month period, a written report must be submitted to the Regional Administrator of the EPA within sixty days of the event.

Pennsylvania Right to Know Hazardous Substance list:

The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

| Component | CAS | Amount |
|-----------|-----------|--------|
| Benzene | 71-43-2 | Trace |
| Xylene | 1330-20-7 | Trace |
| Toluene | 108-88-3 | Trace |



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|------------------------|----------|-------|
| 1,2,4-Trimethylbenzene | 95-63-6 | Trace |
| Ethyl Benzene | 100-41-4 | Trace |
| Ethyl Alcohol | 64-17-5 | 98% |

New Jersey Right to Know Hazardous Substance list:

The following product components are cited in the New Jersey Right to Know Hazardous Substance List, and are present at levels which require reporting.

| <u>Component</u> | <u>CAS</u> | <u>Amount</u> |
|------------------------|------------|---------------|
| Gasoline, natural | 68425-31-0 | 2% |
| Benzene | 71-43-2 | Trace |
| Xylene | 1330-20-7 | Trace |
| Toluene | 108-88-3 | Trace |
| 1,2,4-Trimethylbenzene | 95-63-6 | Trace |
| Ethyl Benzene | 100-41-4 | Trace |
| Ethyl Alcohol | 64-17-5 | 98% |

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause Cancer or Reproductive Toxicity.

| <u>Component</u> | <u>CAS</u> | <u>Amount</u> |
|------------------|------------|---------------|
| Benzene | 71-43-2 | <0.1% |
| Toluene | 108-88-3 | <0.1% |
| Ethyl Benzene | 100-41-4 | <0.1% |
| Ethyl Alcohol | 64-17-5 | 98% |

U.S. Toxic Substances Control Act

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30.

CEPA - Domestic Substances List (DSL)

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Canadian Regulatory Information (WHMIS)

Class B, Division 2 (Flammable Liquid)

Class D, Division 2A (Very toxic by other means) and Class D, Division 2B (Toxic by other means)

16. OTHER INFORMATION

| | |
|------------------|--------------|
| Version | 4 |
| Issue Date | May 20, 2016 |
| Prior Issue Date | May 3, 2015 |

Description of Revisions

Revised to meet Globally Harmonized System for chemical hazard communication requirements pursuant to OSHA regulatory revisions 77 FR 17884, March 26, 2012.

Abbreviations

| | | | |
|----|----------------------------------|-----------------|-----------------------------------|
| °F | Degrees fahrenheit (temperature) | mg | Milligrams |
| < | Less than | mL | Milliliter |
| = | Equal to | mm ² | Square millimeters |
| > | Greater than | mmHg | Millimeters of mercury (pressure) |
| AP | Approximately | ppm | Parts per million |
| C | Centigrade (temperature) | sec | Second |
| kg | Kilogram | ug | Micrograms |
| L | Liter | | |



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Acronyms

| | | | |
|--------|---|-------|--|
| ACGIH | American Conference of Governmental Industrial Hygienists | NTP | National Toxicology Program |
| AIHA | American Industrial Hygiene Association | OPA | Oil Pollution Act of 1990 |
| AL | Action Level | OSHA | U.S. Occupational Safety & Health Administration |
| ANSI | American National Standards Institute | PEL | Permissible Exposure Limit (OSHA) |
| API | American Petroleum Institute | RCRA | Resource Conservation and Recovery Act Reauthorization Act of 1986 Title III |
| CAS | Chemical Abstract Service | REL | Recommended Exposure Limit (NIOSH) |
| CERCLA | Comprehensive Emergency Response, Compensation, and Liability Act | RVP | Reid Vapor Pressure |
| DOT | U.S. Department of Transportation | SARA | Superfund Amendments and |
| EC50 | Ecological concentration 50% | SCBA | Self Contained Breathing Apparatus |
| EPA | U.S. Environmental Protection Agency | SPCC | Spill Prevention, Control, and Countermeasures |
| ERPG | Emergency Response Planning Guideline | STEL | Short-Term Exposure Limit (generally 15 minutes) |
| GHS | Global Harmonized System | TLV | Threshold Limit Value (ACGIH) |
| HMIS | Hazardous Materials Information System | TSCA | Toxic Substances Control Act |
| IARC | International Agency for Research On Cancer | TWA | Time Weighted Average (8 hr.) |
| IATA | International Air Transport Association | UN | United Nations |
| IMDG | International Maritime Dangerous Goods | UNECE | United Nations Economic Commission for Europe |
| Koc | Soil Organic Carbon | WEEL | Workplace Environmental Exposure Level (AIHA) |
| LC50 | Lethal concentration 50% | WHMIS | Canadian Workplace Hazardous Materials Information System |
| LD50 | Lethal dose 50% | | |
| MSHA | Mine Safety and Health Administration | | |
| NFPA | National Fire Protection Association | | |
| NIOSH | National Institute of Occupational Safety and Health | | |
| NOIC | Notice of Intended Change | | |

Disclaimer of Expressed and Implied Warranties

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

** End of Safety Data Sheet **