



24-HOUR EMERGENCY TELEPHONE

SPRAGUE: 603-431-1000

CHEMTREC: 800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: ETHANOL GASOLINE (Reformatted ~ Conventional)

Synonyms: 93 OCTANE PREMIUM, 89 OCTANE MID-GRADE, 87 OCTANE REGULAR UNLEADED GASOLINE, REFORMULATED (RFG) GAS, CONVENTIONAL GASOLINE

Chemical Formula: Not applicable to mixtures

Recommended Use of the Chemical and Restrictions On Use: Blended Motor Fuel

Manufacturer / Supplier: Sprague Operating Resources LLC

Phone: 603-431-1000

185 International Drive, Portsmouth, NH 03801

Emergency Phone Number: SPRAGUE: 603-431-1000; CHEMTREC: 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:

Flammable Liquids - Category 1

Acute Toxicity, Inhalation - Category 4

Skin Irritation – Category 2

Eye Irritation – Category 2B

Carcinogenicity - Category 2

Specific Target Organ Toxicity (Single Exposure) – Category 3

Specific Target Organ Toxicity (Repeated Exposure) – Category 2

Aspiration Hazard – Category 1

Reproductive Toxicity – Category 2

Chronic Aquatic Toxicity – Category 2

Risk Phrases:

R20: Harmful by inhalation.

R35: Irritating to eyes.

R38: Irritating to skin.

R45: May cause cancer.

R51 / 53: Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

R62: Possible risk of impaired fertility.

R63: Possible risk of harm to the unborn child.

R65: Harmful: may cause lung damage if swallowed.

R67: Vapors may cause drowsiness and dizziness.

Label Elements:

Trade Name: GASOLINE

Signal Word: Danger



Hazard Statements:

H224: Extremely flammable liquid and vapor.
 H304: May be fatal if swallowed and enters airways.
 H315: Causes skin irritation.
 H320: Causes eye irritation.
 H332: Harmful if inhaled.
 H336: May cause drowsiness or dizziness.
 H350: May cause cancer.
 H361: Suspected of damaging fertility or the unborn child.
 H371: May cause damage to organs.
 H373: May cause damage to organs through prolonged or repeated exposure.
 H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P201: Obtain special instructions before use.
 P202: Do not handle until all safety precautions have been read and understood.
 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 equipment.
 P242: Use only non-sparking tools.
 P243: Take precautionary measures against static discharge.
 P260: Do not breathe dust / fume / gas / mist / vapors / spray.
 P261: Avoid breathing dust / fume / gas / mist / vapors / spray.
 P264: Wash hands thoroughly after handling.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear protective gloves / protective clothing / eye protection / face protection.
 P281: Use personal protective equipment as required.
 P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
 P303 + P361 + P353: IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
 P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P308 + P313: IF exposed or concerned: Get medical advice / attention.
 P312: Call a POISON CENTER or doctor / physician if you feel unwell.
 P314: Get medical advice / attention if you feel unwell.
 P331: Do not induce vomiting.
 P332 + P313: If skin irritation occurs: Get medical advice / attention.
 P362: Take off contaminated clothing and wash before reuse.
 P391: Collect spillage.
 P403: Store in a well ventilated place.
 P405: Store locked up.
 P501: Dispose of contents / container to an approved waste disposal plant.

3. Composition / Information on Ingredients**CAS Number:** 8006-61-9**EC Number:** 232-349-1**Index Number:** 649-261-00-8**Molecular Weight:** Not applicable to mixtures

Ingredient	CAS Number	Percent	Hazardous	Chemical Characterization
Light Petroleum Distillate	8006-61-9	0 - < 99.9	Yes	Substance
Benzene	71-43-2	0 - 2	Yes	Substance
Cumene	98-82-8	0 - < 1	Yes	Substance
Ethyl Benzene	100-41-4	0 - < 5	Yes	Substance
Toluene	108-88-3	0 - 30	Yes	Substance
Xylene	1330-20-7	0 - 25	Yes	Substance

Naphthalene	91-20-3	0 - 5	Yes	Substance
Cyclohexane	110-82-7	0 - 9	Yes	Substance
O Hexane (all isomers)	NA	0 - 1	Yes	Substance
1,2,4 Trimethyl Benzene	95-63-6	0 - 5	Yes	Substance
Butane	106-97-8	0 - 9	Yes	Substance
Ethyl Alcohol (Ethanol)	64-17-5	0 - 10	Yes	Substance

4. First-aid Measures

Inhalation: Remove from vapor to fresh air. If breathing has stopped, give artificial respiration. Maintain airway and blood pressure and administer oxygen, if available. Keep affected person warm and at rest. Qualified personnel should perform administration of oxygen. Get medical attention immediately.

Ingestion: DO NOT INDUCE VOMITING or give anything by mouth to an unconscious person. When vomiting occurs, keep person's head lower than hips to prevent pulmonary aspiration. Get medical attention immediately. If less than ½ pint (liter) ingested, immediately give 1-2 glasses of water and call a physician. Ingestion in small quantities is not expected to be a problem.

Skin Contact: Remove fuel soaked clothing and launder before reuse. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 - 20 minutes.) If irritation develops, seek medical aid.

Eye Contact: Check for and remove any contact lenses. Flush eyes immediately with large amounts of water, occasionally lifting upper and lower lids until no evidence of chemical remains (approximately 15-20 minutes). If irritation develops, seek medical aid.

5. Fire-fighting Measures

Fire: Extremely Flammable Liquid and Vapor!

Explosion: When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Vapor explosion hazard indoors, outdoors, or in sewers.

Fire Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical, and Water Fog.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Cool exposed containers with water spray.

Evacuate area. For large spills, fire-fighting foam is the preferred agent and should be applied in sufficient quantities to blanket the gasoline surface. Water spray may be used to flush spill away from exposures, but good judgment should be practiced to prevent spreading of the gasoline into sewers, streams or drinking water supplies. If a leak or spill has not ignited, apply a foam blanket to suppress the release of vapors. If foam is not available, a water spray curtain can be used to disperse vapors and to protect personnel attempting to stop the leak. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Keep out of sewers, drainage areas and waterways. Run-off may create a fire and explosion hazard in storm drains and sewer systems. If properly trained, proceed with the following measures:

1. For small spills, take up with sand or other absorbent material and place into containers for later disposal.
 2. For large spills, dike far ahead of spill to prevent entrance into watercourses and/or ground water.
- Observe local, state, and federal governmental regulations.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities:

Never siphon gasoline by mouth.
Gasoline should not be used as a solvent or cleaning agent.
Avoid contact with skin. Avoid inhalation of vapors or mists.

Protect against physical damage and excessive temperatures. Store away from all ignition sources in cool area equipped with automatic sprinkling system. Outside or detached storage preferred. Store in a well-ventilated location, away from any area where the fire hazard may be acute that complies with NFPA 30 "Flammable and Combustible Liquid Code." Separate from incompatibles, including strong oxidizers.

Drums and storage containers should be bonded and grounded for transfers to avoid static sparks. Drums and storage containers should be equipped with self-closing valves, pressure vacuum bungs and flame arresters. Storage and use areas should be No Smoking areas. Use non-sparking type tools and explosion proof equipment. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

Portable containers approved for storing fuel must be placed on the ground and the nozzle must stay in contact with the container when filling to prevent build-up and discharge of static electricity.

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."

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when this product is loaded into tanks previously containing low flash point products (such as gasoline) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

8. Exposure Controls / Personal Protection

Airborne Exposure Limits:

Ingredient	CAS Number	OSHA PEL	ACGIH TLV
Light Petroleum Distillate	8006-61-9	300 mg/m ³	300 mg/m ³
Benzene	71-43-2	1 mg/m ³	10 mg/m ³
Cumene	98-82-8	50 mg/m ³	50 mg/m ³
Ethyl Benzene	100-41-4	100 mg/m ³	100 mg/m ³
Toluene	108-88-3	100 mg/m ³ TWA / 150 mg/m ³ STEL	50 mg/m ³
Xylene	1330-20-7	100 mg/m ³ TWA / 150 mg/m ³ STEL	100 mg/m ³
Naphthalene	91-20-3	10 mg/m ³	10 mg/m ³
Cyclohexane	110-82-7	300 mg/m ³	300 mg/m ³
O Hexane (all isomers)	NA	500 mg/m ³	500 mg/m ³
1,2,4 Trimethyl Benzene	95-63-6	25 mg/m ³	25 mg/m ³
Butane	106-97-8	800 ppm TWA	800 ppm TWA
Ethyl Alcohol (Ethanol)	64-17-5	100 ppm STEL	N/A

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details. Use explosion-proof equipment.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, use of a NIOSH-approved respirator is required. Per 29 CFR 1910.134 or 29 CFR 1028, use either a positive pressure supplied air respirator or an air-purifying respirator for organic vapors.

Skin Protection: Gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure - Neoprene, PVC.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible.

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. Physical and Chemical Properties

Appearance: Colorless liquid

Odor: Gasoline odor

Odor Threshold: < 1 ppm (Reference Value)

pH: No information found

% Volatiles by volume @ 21C (70F): 100

Melting Point: Not determined

Boiling Point / Boiling Range: 100 - 430F (38 - 221C)

Flash Point: -40F (-40C) (Reference Value)

Evaporation Rate (BuAC=1): Rapid; varies with conditions

Flammability: Extremely Flammable Liquid and Vapor!

Upper / Lower Flammability or Explosive Limits: Upper – 7.6 / Lower – 1.4 (Reference Value)

Vapor Pressure (mm Hg): 325 - 525 (mmHg @ 20C)

Vapor Density (Air=1): Less than 4

Relative Density: Not determined

Solubility: Slight

Partition Coefficient: n-octanol / water: > Not determined

Auto-ignition Temperature: > 536F (280C) (Reference Value)

Decomposition Temperature: Not determined

Viscosity: Low viscosity material

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage at normal temperatures and pressures.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flames, ignition sources and incompatibles. Avoid build-up of static electricity.

Incompatible Materials: May explode or react violently when exposed to oxidizing materials. Avoid halogens, strong acids, and alkalis.

Hazardous Decomposition Products: Carbon monoxide, oxides of nitrogen, and hydrocarbons.

11. Toxicological Information

Potential Health Effects:

Inhalation: Central nervous system depressant. May cause headaches and irritation to the nose, throat, and lungs.

Ingestion: May cause irritation and burning of the gastrointestinal tract (mouth, throat, and stomach). May cause nausea, vomiting, diarrhea, and restlessness.

Skin Contact: May cause irritation, drying, and cracking of the skin. May cause dermatitis.

Eye Contact: Irritation of the eye.

Chronic Exposure:

Inhalation: Chronic exposure to the component benzene may result in adverse effects of the blood including anemia, decreased white blood cell count, decreased platelets, aplastic anemia and leukemia. In addition, chronic inhalation of vapors of the component benzene may cause fatigue, nervousness, irritability, blurred vision and labored breathing. Chronic inhalation of the n-hexane vapors, a component of this material, may result in severe degeneration of the peripheral nervous system. Epidemiological studies have reported anxiety and asthmatic bronchitis among workers chronically exposed to isomers of trimethylbenzene.

Ingestion: Chronic effects of ingestion and subsequent aspiration of this product into the lungs may include pneumatocele (lung cavity) formation and chronic lung dysfunction.

Skin Contact: Prolonged and repeated contact with the skin may cause redness, blistering, dryness, lesions and/or scaly dermatitis.

Eye Contact: Symptoms of chronic exposure resemble those of acute exposure.

Additional Toxicological Information: Studies conducted by the American Petroleum Institute examined a reference unleaded gasoline for mutagenic, teratogenic and sensitization potential; no evidence of these hazards was found. However, isolated constituents of gasoline may display these or other potential hazards in laboratory tests. There were no significant adverse effects in three-month subchronic inhalation studies in rats or monkeys, or in a two-year skin cancer study in mice. Studies with laboratory concentrations over a prolonged period of time caused kidney damage and kidney cancer in male rats and liver cancer in female mice. There was no evidence of significant adverse systemic or reproductive effects for light catalytic cracked naphthas and reformed naphthas. Components: Gasoline consists of a complex blend of petroleum/processing derived paraffinic, olefinic, naphthenic and aromatic hydrocarbons which include up to 5% benzene (with 1-2% typical in the U.S.), n-hexane, mixed zylenes, toluene, ethylbenzene and trimethyl benzene. Repeated exposures to low levels of benzene have been reported to result in blood abnormalities including anemia and, in rare cases, leukemia in both animals and humans. Prolonged exposure to n-hexane may result in nervous system damage, including numbness of the extremities and, in extreme cases, paralysis. The adverse effects associated with these components have not been observed in studies with gasoline or the refinery streams from which it is formulated.

Carcinogenicity: The International Agency for Research on Cancer (IARC) has determined that gasoline is possibly carcinogenic to humans (2B.) Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. 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. This product may contain benzene. The NTP, ARC, OSHA and ACGIH list benzene as a human carcinogen. This product may contain methyl-tert-butyl ether (MTBE.) MTBE is classified as an animal carcinogen (A3) by the ACGIH.

Reproductive Toxicity: Studies conducted by the American Petroleum Institute examined a reference unleaded gasoline and found that there was no evidence of significant adverse systemic or reproductive effects for light catalytic cracked naphthas and reformed naphthas. This product may contain toluene: A number of case reports indicate that toluene is a developmental toxicant. Developmental toxic effects comparable to those observed in humans have been seen in lab animals but the effects were generally associated with maternal toxicity. This product may contain ethyl benzene for which birth defects were noted in rats, but not rabbits, at doses which caused toxic effects in the mothers. This product may contain benzene. Animal studies on benzene demonstrated immunotoxicity, testicular effects, and alterations in reproductive cycles, evidence of chromosomal damage or other chromosomal changes, and embryo / fetotoxicity but not teratogenicity.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Aspiration Respiratory Organs Hazard: Low viscosity material. Aspiration can cause serious or fatal lung damage.

Acute Toxicity:

Oral Rat LD50: > 5000 mg/kg bodyweight (ARCO, 1986b) / Inhalation Rat LC50: > 5.2 mg/l (ARCO, 1992)

Dermal Rabbit LD50: > 2000 mg/kg bodyweight (ARCO, 1986a)

12. Ecological Information

Ecotoxicity: Harmful to aquatic life in very low concentrations.
8 ppm (Bluegill) - 96 h; 1.5 ppm (Grass Shrimp) - 96 h

Persistence and Degradability: Based on compositional information available and measured or predicted data on key constituents, gasoline and gasoline naphthas are not expected to meet the criteria for ready degradability but are inherently biodegradable. Ground water may be contaminated. Although gasoline is biodegradable, it may persist for prolonged time periods, particularly where oxygen levels are reduced. The hydrocarbon components of gasoline are slightly soluble in water.

Bioaccumulative Potential: Constituents of gasoline naphthas are considered potentially bioaccumulative.

Mobility in Soil: Spilled gasoline can result in environmental damage when it absorbs and penetrates the soil.

Other adverse effects: Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

13. Disposal Considerations

Under EPA RCRA (40 CFR 261.21):

1. If this product becomes a waste material intended for disposal and has a flash point below 140 F, it would be ignitable hazardous waste (waste code number D001.)
2. If this product becomes a waste material intended for disposal and has a TCLP benzene concentration greater than 0.5 PPM, it would be considered a toxic waste (waste code number D018.)

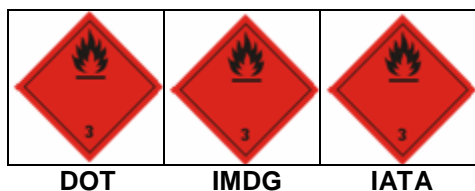
Refer to latest EPA or state regulations regarding proper disposal.

14. Transport Information

UN Number: UN1203

UN Proper Shipping Name: GASOLINE

Packing Group: II



Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)

Transport Hazard Class(es): 3

Maritime Transport IMDG/GGVSea

Transport Hazard Class(es): 3

Marine Pollutant: Yes

Air Transport ICAO-TI and IATA-DGR

Transport Hazard Class(es): 3

Transport in Bulk (according to Annex II of MARPOL 73/78 and the IBC Code:) Not Applicable

Special Precautions for User:

CONTAINS GASOLINE DANGER! FOR INDUSTRIAL USE ONLY!

EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. MAY CAUSE EYE, SKIN, NOSE, THROAT AND LUNG IRRITATION, DIZZINESS, NAUSEA, LOSS OF CONSCIOUSNESS. LOW VISCOSITY MATERIAL - IF SWALLOWED MAY BE ASPIRATED AND CAN CAUSE SERIOUS OR FATAL LUNG DAMAGE.

LONG-TERM EXPOSURE TO GASOLINE VAPOR HAS CAUSED KIDNEY AND LIVER CANCER IN LABORATORY ANIMALS.

Keep away from heat, sparks, and flame. Avoid all personal contact. Avoid prolonged breathing of vapor. Keep container closed. Use with adequate ventilation. Misuse of gasoline may cause serious injury or illness. For use as a motor fuel only. Not to be used as a solvent or skin cleaning agent. Never siphon by mouth.

FIRST AID: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician immediately. In case of contact, immediately wash skin with soap and plenty of water. Remove contaminated clothing. Call a physician if symptoms occur. Wash clothing before reuse. If swallowed, seek immediate medical attention. Do not induce vomiting. Only induce vomiting at the instruction of a physician. Do not induce vomiting or give anything by mouth to an unconscious person.

15. Regulatory Information

Chemical Inventory Status

All components, except butane (106-97-8) are listed in TSCA.
All components are listed in EC and Canada DSL.

Federal, State & International Regulations

Ingredient	SARA 302		SARA 313		CERCLA	RCRA
	RQ	TPQ	List Chemical	Catg.		
Light Petroleum Distillate (8006-61-9)	No	No	Yes	Yes	No *	No
Benzene(71-43-2)	No	No	Yes	Yes	1 *	U247
Cumene (98-82-8)	No	No	Yes	Yes	5000 *	U055
Ethyl Benzene (100-41-4)	No	No	Yes	No	1000 *	No
Toluene (108-88-3)	No	No	Yes	Yes	1000 *	U220
Xylene (1330-20-7)	No	No	Yes	Yes	100 *	U239
Naphthalene (91-20-3)	No	No	Yes	Yes	100 *	U165
Cyclohexane (110-82-7)	No	No	Yes	Yes	1000 *	U056
1,2,4 Trimethyl Benzene (95-63-6)	No	No	Yes	No	No	No
Butane (106-97-8)	No	No	No	No	10,000 *	No
Ethyl Alcohol (64-17-5)	No	No	No	No	No	No

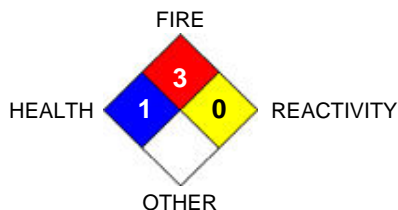
* CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT) The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting including SARA Section 304, as well as the Clean Water Act may still apply.

SARA 311/312	Acute: Yes	Chronic: Yes	Fire: Yes	Pressure: No	Reactivity: No
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16. Other Information

HMIS / NFPA Hazard Rating:

- 4=EXTREME
- 3= SERIOUS
- 2= MODERATE
- 1=SLIGHT
- 0=MINIMAL



Effective Date: 11/01/13 – Modified aspiration instructions

Previous Revisions:

05/01/13 – Standardized for GHS and REACH

01/19/2004, 06/05

The information contained herein is based on data available at this time and is believed to be accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Since information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar, no responsibility is assumed for the results of its use. The person receiving this information shall make his / her own determination of the suitability of the material for his / her particular purposes.