MATERIAL SAFETY DATA SHEET

SECTION 1   PRODUCT AND COMPANY IDENTIFICATION

PRODUCT
Product Name:  GASOLINE UNLEADED WITH ETHANOL (GASOHOL)
Product Description:  Hydrocarbons and Additives
Product Code:  12443
Intended Use:  Fuel

COMPANY IDENTIFICATION
Supplier:  Canada Imperial Oil Limited, An Affiliate of Exxon Mobil Corporation
P.O. Box 2480, Station M
Calgary, ALBERTA.  T2P 3M9     Canada
24 Hour Health Emergency  519-339-2145
Transportation Emergency Phone  519-339-2145
Supplier General Contact  1-800-567-3776

SECTION 2   COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>Concentration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>5 - 10%</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>86290-81-5</td>
<td>85 - 95%</td>
</tr>
<tr>
<td>METHYL-TERT-BUTYL ETHER</td>
<td>1634-04-4</td>
<td>0 - 7%</td>
</tr>
</tbody>
</table>

Hazardous Constituent(s) Contained in Complex Substance(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS#</th>
<th>Concentration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td>0 - 1.5%</td>
</tr>
<tr>
<td>CUMENE</td>
<td>98-82-8</td>
<td>0 - 1%</td>
</tr>
<tr>
<td>CYCLOHEXANE</td>
<td>110-82-7</td>
<td>0 - 1%</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>100-41-4</td>
<td>0 - 3%</td>
</tr>
<tr>
<td>N-HExANE</td>
<td>110-54-3</td>
<td>0 - 3%</td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>91-20-3</td>
<td>0 - 1%</td>
</tr>
<tr>
<td>TOluene</td>
<td>108-88-3</td>
<td>0 - 20%</td>
</tr>
<tr>
<td>XYLENEnes</td>
<td>1330-20-7</td>
<td>0 - 10%</td>
</tr>
</tbody>
</table>

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

NOTE: The concentration of the components shown above may vary substantially. In certain countries, benzene content may be limited to lower levels. Oxygenates such as tertiary-amyl-methyl ether, ethanol, di-isopropyl ether, and ethyl-tertiary-butyl ether may be present. Because of volatility considerations, gasoline vapor may have concentrations of components very different from those of liquid gasoline. The major components of gasoline vapor are: butane, isobutane, pentane, and isopentane. The reportable component percentages, shown in the composition/information on ingredients section, are based on API's evaluation of a typical gasoline mixture. Motor gasoline is considered a mixture by EPA under the Toxic Substances Control Act (TSCA). The refinery streams used to blend motor gasoline are all on the TSCA Chemical Substances Inventory.

SECTION 3   HAZARDS IDENTIFICATION
This material is considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

**POTENTIAL PHYSICAL / CHEMICAL EFFECTS**
Extremely flammable. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited. Material can accumulate static charges which may cause an ignition.

**POTENTIAL HEALTH EFFECTS**
Irritating to skin. If swallowed, may be aspirated and cause lung damage. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression. High-pressure injection under skin may cause serious damage. Prolonged and repeated exposure to benzene may cause serious injury to blood forming organs and is associated with anemia and to the later development of acute myelogenous leukemia (AML).

**Target Organs:** Lung | Skin

**ENVIRONMENTAL HAZARDS**
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

<table>
<thead>
<tr>
<th>NFPA Hazard ID:</th>
<th>Health: 1</th>
<th>Flammability: 3</th>
<th>Reactivity: 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS Hazard ID:</td>
<td>Health: 1*</td>
<td>Flammability: 3</td>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

### SECTION 4 FIRST AID MEASURES

**Inhalation**
Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

**SKIN CONTACT**
Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

**EYE CONTACT**
Flush thoroughly with water. If irritation occurs, get medical assistance.

**Ingestion**
Seek immediate medical attention. Do not induce vomiting.

**NOTE TO PHYSICIAN**
If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

**PRE-EXISTING MEDICAL CONDITIONS WHICH MAY BE AGGRAVATED BY EXPOSURE**
Benzene- Individuals with liver disease may be more susceptible to toxic effects.

SECTION 5  FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Unusual Fire Hazards:** Extremely Flammable. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

**Hazardous Combustion Products:** Smoke, Fume, Aldehydes, Sulfur oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

**Flash Point [Method]:** -40C (-40F) [ ASTM D-92]

**Flammable Limits (Approximate volume % in air):** LEL: 1.5  UEL: 7.6

**Autoignition Temperature:** N/D

SECTION 6  ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for Personal Protective Equipment.

SPILL MANAGEMENT

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces.
Water Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Do not confine in area of spill. Advise occupants and shipping in downwind areas of fire and explosion hazard and warn them to stay clear. Allow liquid to evaporate from the surface. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS
Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING
Avoid breathing mists or vapors. Avoid contact with skin. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Do not siphon by mouth. Use only with adequate ventilation. Do not use as a cleaning solvent or other non-motor fuel uses. For use as a motor fuel only. It is dangerous and/or unlawful to put fuel into unapproved containers. Do not fill container while it is in or on a vehicle. Static electricity may ignite vapors and cause fire. Place container on ground when filling and keep nozzle in contact with container. Do not use electronic devices (including but not limited to cellular phones, computers, calculators, pagers or other electronic devices, etc.) in or around any fueling operation or storage area unless the devices are certified intrinsically safe by an approved national testing agency and to the safety standards required by national and/or local laws and regulations. Prevent small spills and leakage to avoid slip hazard.

Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practice on Static Electricity) or CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).

Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semiconductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semiconductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid.

STORAGE
Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. The container choice, for example storage vessel, may effect static accumulation and dissipation. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be grounded and bonded. Drums must be grounded and bonded and equipped with self-closing valves, pressure vacuum bungs and flame arresters.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMIT VALUES
## Exposure limits/standards (Note: Exposure limits are not additive)

<table>
<thead>
<tr>
<th>Source</th>
<th>Form</th>
<th>Limit / Standard</th>
<th>NOTE</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZENE</td>
<td>OSHA</td>
<td>Action level 0.5 ppm</td>
<td>N/A</td>
<td>OSHA Sp.Reg.</td>
</tr>
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<td>BENZENE</td>
<td>STEL</td>
<td>5 ppm</td>
<td>N/A</td>
<td>OSHA Sp.Reg.</td>
</tr>
<tr>
<td>BENZENE</td>
<td>TWA</td>
<td>1 ppm</td>
<td>N/A</td>
<td>OSHA Sp.Reg.</td>
</tr>
<tr>
<td>BENZENE</td>
<td>STEL</td>
<td>2.5 ppm</td>
<td>Skin</td>
<td>ACGIH</td>
</tr>
<tr>
<td>BENZENE</td>
<td>TWA</td>
<td>0.5 ppm</td>
<td>Skin</td>
<td>ACGIH</td>
</tr>
<tr>
<td>CUMENE</td>
<td>TWA</td>
<td>245 mg/m3 50 ppm</td>
<td>Skin</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>CUMENE</td>
<td>TWA</td>
<td>50 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>CYCLOHEXANE</td>
<td>TWA</td>
<td>1050 mg/m3 300 ppm</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>CYCLOHEXANE</td>
<td>TWA</td>
<td>100 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>TWA</td>
<td>1900 mg/m3 1000 ppm</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>STEL</td>
<td>1000 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>TWA</td>
<td>435 mg/m3 100 ppm</td>
<td>N/A</td>
<td>OSHA Z1</td>
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<tr>
<td>ETHYL BENZENE</td>
<td>STEL</td>
<td>125 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>TWA</td>
<td>100 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>STEL</td>
<td>200 ppm</td>
<td>N/A</td>
<td>ExxonMobil</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>TWA</td>
<td>100 ppm</td>
<td>N/A</td>
<td>ExxonMobil</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>Vapor.</td>
<td>300 mg/m3 100 ppm</td>
<td>N/A</td>
<td>ExxonMobil</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>STEL</td>
<td>500 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>TWA</td>
<td>300 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>METHYL-TERT-BUTYL ETHER</td>
<td>TWA</td>
<td>50 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>N-Hexane</td>
<td>TWA</td>
<td>1800 mg/m3 500 ppm</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>N-Hexane</td>
<td>TWA</td>
<td>50 ppm</td>
<td>Skin</td>
<td>ACGIH</td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>TWA</td>
<td>50 mg/m3 10 ppm</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>STEL</td>
<td>15 ppm</td>
<td>Skin</td>
<td>ACGIH</td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>TWA</td>
<td>10 ppm</td>
<td>Skin</td>
<td>ACGIH</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>Ceiling</td>
<td>300 ppm</td>
<td>N/A</td>
<td>OSHA Z2</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>Maximum concentration</td>
<td>500 ppm</td>
<td>N/A</td>
<td>OSHA Z2</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>TWA</td>
<td>200 ppm</td>
<td>N/A</td>
<td>OSHA Z2</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>TWA</td>
<td>20 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>XYLENES</td>
<td>TWA</td>
<td>435 mg/m3 100 ppm</td>
<td>N/A</td>
<td>OSHA Z1</td>
</tr>
<tr>
<td>XYLENES</td>
<td>STEL</td>
<td>150 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
<tr>
<td>XYLENES</td>
<td>TWA</td>
<td>100 ppm</td>
<td>N/A</td>
<td>ACGIH</td>
</tr>
</tbody>
</table>

**NOTE:** Limits/standards shown for guidance only. Follow applicable regulations.

### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:
Use explosion-proof ventilation equipment to stay below exposure limits.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION

Physical State: Liquid
Color: Clear (May Be Dyed)
Odor: Petroleum/Solvent
Odor Threshold: N/D
**IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION**

Relative Density (at 15 C): 0.751

Flash Point [Method]: -40C (-40F) [ ASTM D-92]

Flammable Limits (Approximate volume % in air): LEL: 1.5 UEL: 7.6

Autoignition Temperature: N/D

Boiling Point / Range: 35C (95F) - 225C (437F)

Vapor Density (Air = 1): 4 at 101 kPa

Vapor Pressure: 45 kPa (337.5 mm Hg) at 20 C - 74 kPa (555 mm Hg) at 20 C

Evaporation Rate (n-butyl acetate = 1): > 10

pH: N/A

Log Pow (n-Octanol/Water Partition Coefficient): > 3

Solubility in Water: Appreciable

Viscosity: <1 cSt (1 mm2/sec) at 40 C | 0.8 cSt (0.8 mm2/sec) at 20C

Oxidizing Properties: See Hazards Identification Section.

**OTHER INFORMATION**

Freezing Point: N/D

Melting Point: N/A

Pour Point: < -60°C (-76°F)

**SECTION 10**

**STABILITY AND REACTIVITY**

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Avoid heat, sparks, open flames and other ignition sources.

**MATERIALS TO AVOID:** Halogens, Strong Acids, Alkalies, Strong oxidizers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**SECTION 11**

**TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY**

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Conclusion / Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
</tr>
<tr>
<td>Toxicity (Rat): LC50 &gt; 5000 mg/m3</td>
<td>Minimally Toxic. Based on test data for structurally similar materials.</td>
</tr>
<tr>
<td>Irritation: No end point data.</td>
<td>Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs. Based on assessment of the components.</td>
</tr>
</tbody>
</table>

| **Ingestion**     |                     |
| Toxicity (Rat): LD50 > 2000 mg/kg | Minimally Toxic. Based on test data for structurally similar materials. |

| **Skin**          |                     |
| Toxicity (Rabbit): LD50 > 2000 mg/kg | Minimally Toxic. Based on test data for structurally similar materials. |
| Irritation: No end point data. | Moderately irritating to skin with prolonged exposure. Based on test data for structurally similar materials. |
Eye Irritation: Data available. May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

CHRONIC/OTHER EFFECTS

For the product itself:

Laboratory animal studies have shown that prolonged and repeated inhalation exposure to light hydrocarbon vapors in the same boiling range as this product can produce adverse kidney effects in male rats. However, these effects were not observed in similar studies with female rats, male and female mice, or in limited studies with other animal species. Additionally, in a number of human studies, there was no clinical evidence of such effects at normal occupational levels. In 1991, The U.S. EPA determined that the male rat kidney is not useful for assessing human risk.

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

Contains:

BENZENE: Caused cancer (leukemia), damage to the blood-producing system, and serious blood disorders from prolonged, high exposure based on human epidemiology studies. Caused genetic effects and effects on the immune system in laboratory animal and some human studies. Caused toxicity to the fetus in laboratory animal studies.

CUMENE: Repeated inhalation exposure of cumene vapor produced damage in the kidney of male rats only. These effects are believed to be species specific and are not relevant to humans.

ETHANOL: Prolonged or repeated exposure to high concentrations of ethanol vapor or overexposure by ingestion may produce adverse effects to brain, kidney, liver, and reproductive organs, birth defects in offspring, and developmental toxicity in offspring.

Gasoline unleaded: Caused cancer in animal tests. Chronic inhalation studies resulted in liver tumors in female mice and kidney tumors in male rats. Neither result considered significant for human health risk assessment by the United States EPA and others. Did not cause mutations In Vitro or In Vivo. Negative in inhalation developmental studies and reproductive tox studies. Inhalation of high concentrations in animals resulted in reversible central nervous system depression, but no persistent toxic effect on the nervous system. Non-sensitizing in test animals. Caused nerve damage in humans from abusive use (sniffing).

Methyl tertiary butyl ether (MTBE): Carcinogenic in animal tests. Inhalation exposure to high concentrations resulted in higher than expected mortality in male mice due to urinary tract obstructions and female mice displayed benign liver tumors. Inhalation exposure to high concentrations resulted in higher than expected mortality in male rats due to progressive kidney damage as well as increased benign and malignant kidney tumors, and benign testicular tumors. Did not cause mutations In Vitro or In vivo. Rabbits exposed to high vapor concentrations did not have any offspring with adverse developmental effects. Mice exposed to high vapor concentrations (maternally toxic) had offspring with embryo/fetal toxicity and birth defects. Rats exposed to high vapor concentrations did not display any treatment-related effects in a two generation reproduction study. The significance of the animal findings at high exposures are not believed to be directly related to potential human health hazards in the workplace.

NAPHTHALENE: Exposure to high concentrations of naphthalene may cause destruction of red blood cells, anemia, and cataracts. Naphthalene caused cancer in laboratory animal studies, but the relevance of these findings to humans is uncertain.

N-HEXANE: Prolonged and/or repeated exposures to n-Hexane can cause progressive and potentially irreversible damage to the peripheral nervous system (e.g. fingers, feet, arms, legs, etc.). Simultaneous exposure to Methyl Ethyl Ketone (MEK) or Methyl Isobutyl Ketone (MIBK) and n-Hexane can potentiate the risk of adverse effects from n-Hexane on the peripheral nervous system. n-Hexane has been shown to cause testicular damage at high doses in male rats. The relevance of this effect for humans is unknown.

TOLUENE: Concentrated, prolonged or deliberate inhalation may cause brain and nervous system damage. Prolonged and repeated exposure of pregnant animals (> 1500 ppm) have been reported to cause adverse fetal
developmental effects.

ETHYLBENZENE: Caused cancer in laboratory animal studies. The relevance of these findings to humans is uncertain.

Additional information is available by request.

The following ingredients are cited on the lists below:

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<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>List Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td>1, 3, 6</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>100-41-4</td>
<td>5</td>
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<tr>
<td>GASOLINE</td>
<td>86290-81-5</td>
<td>5</td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>91-20-3</td>
<td>2, 5</td>
</tr>
</tbody>
</table>

---REGULATORY LISTS SEARCHED---

1 = NTP CARC
3 = IARC 1
5 = IARC 2B
2 = NTP SUS
4 = IARC 2A
6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY
Material -- Expected to be toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

MOBILITY
More volatile component -- Highly volatile, will partition rapidly to air. Not expected to partition to sediment and wastewater solids.
Less volatile component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY
Biodegradation:
Majority of components -- Expected to be inherently biodegradable

Atmospheric Oxidation:
More volatile component -- Expected to degrade rapidly in air

BIOACCUMULATION POTENTIAL
Majority of components -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY. TCLP (BENZENE)

Empty Container Warning

Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGINITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)

Proper Shipping Name: GASOLINE
Hazard Class & Division: 3
ID Number: 1203
Packing Group: II
ERG Number: 128
Label(s): 3
Transport Document Name: UN1203, GASOLINE, 3, PG II

LAND (TDG)

Proper Shipping Name: GASOLINE
Hazard Class & Division: 3
UN Number: 1203
Packing Group: II
Marine Pollutant: Yes
Special Provisions: 17

Footnote: Marine Pollutant designation is applicable only if shipped over water.

SEA (IMDG)

Proper Shipping Name: MOTOR SPIRIT or GASOLINE or PETROL
Hazard Class & Division: 3
EMS Number: F-E, S-E
UN Number: 1203
Packing Group: II
Label(s): 3
Transport Document Name: UN1203, MOTOR SPIRIT or GASOLINE or PETROL, 3, PG II, (-40°C c.c.)

AIR (IATA)

Proper Shipping Name: MOTOR SPIRIT or GASOLINE or PETROL
Hazard Class & Division: 3
SECTION 15  REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Contact local authorities to determine if other reporting requirements apply.


SARA (313) TOXIC RELEASE INVENTORY:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Typical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUMENE</td>
<td>98-82-8</td>
<td>0 - 1%</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>0 - 20%</td>
</tr>
<tr>
<td>CYCLOHEXANE</td>
<td>110-82-7</td>
<td>0 - 1%</td>
</tr>
<tr>
<td>N-HEXANE</td>
<td>110-54-3</td>
<td>0 - 3%</td>
</tr>
<tr>
<td>NAPHTHALENE</td>
<td>91-20-3</td>
<td>0 - 1%</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>100-41-4</td>
<td>0 - 3%</td>
</tr>
<tr>
<td>XYLENES</td>
<td>1330-20-7</td>
<td>0 - 10%</td>
</tr>
<tr>
<td>METHYL-TERT-BUTYL ETHER</td>
<td>1634-04-4</td>
<td>0 - 7%</td>
</tr>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td>0 - 1.5%</td>
</tr>
</tbody>
</table>

The following ingredients are cited on the lists below:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>List Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZENE</td>
<td>71-43-2</td>
<td>1, 2, 4, 10, 11, 13, 15, 16, 17, 18, 19</td>
</tr>
<tr>
<td>CUMENE</td>
<td>98-82-8</td>
<td>1, 4, 13, 16, 17, 18, 19</td>
</tr>
<tr>
<td>CYCLOHEXANE</td>
<td>110-82-7</td>
<td>1, 4, 13, 16, 17, 18, 19</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>1, 4, 13, 16, 17, 18, 19</td>
</tr>
<tr>
<td>ETHYL BENZENE</td>
<td>100-41-4</td>
<td>1, 4, 10, 13, 16, 17, 18, 19</td>
</tr>
<tr>
<td>GASOLINE</td>
<td>86290-81-5</td>
<td>1, 18</td>
</tr>
<tr>
<td>METHYL-TERT-BUTYL ETHER</td>
<td>1634-04-4</td>
<td>1, 16, 17, 18</td>
</tr>
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<td>N-HEXANE</td>
<td>110-54-3</td>
<td>1, 4, 13, 16, 17, 18, 19</td>
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<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>1, 4, 11, 13, 15, 16, 17, 18, 19</td>
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<tr>
<td>XYLENES</td>
<td>1330-20-7</td>
<td>1, 4, 5, 13, 15, 16, 17, 18, 19</td>
</tr>
</tbody>
</table>
**SECTION 16 OTHER INFORMATION**

N/D = Not determined, N/A = Not applicable

---REGULATORY LISTS SEARCHED---

1 = ACGIH ALL  
2 = ACGIH A1  
3 = ACGIH A2  
4 = OSHA Z  
5 = TSCA 4  
6 = TSCA 5a2  
7 = TSCA 5e  
8 = TSCA 6  
9 = TSCA 12b  
10 = CA P65 CARC  
11 = CA P65 REPRO  
12 = CA RTK  
13 = IL RTK  
14 = LA RTK  
15 = MI 293  
16 = MN RTK  
17 = NJ RTK  
18 = PA RTK  
19 = RI RTK

Code key: CARC=Carcinogen; REPRO=Reproductive

**SYNONYMS:**  
GASOLINE REGULAR UNLEADED RUL87 WITH ETHANOL, GASOLINE REGULAR UNLEADED RUL87 DCA DYED WITH ETHANOL, GASOLINE REGULAR UNLEADED RUL87 LDCA WITH ETHANOL, GASOLINE MIDGRADE UNLEADED MUL89 LDCA WITH ETHANOL, GASOLINE MIDGRADE UNLEADED MUL89 DCA WITH ETHANOL, GASOLINE REGULAR UNLEADED RUL87 DCA DYED WITH ETHANOL, GASOLINE REGULAR UNLEADED RUL87 LDCA DYED WITH ETHANOL, EXXON MIDGRADE GASOLINE WITH ETHANOL, EXXON PREMIUM GASOLINE WITH ETHANOL, EXXON REGULAR GASOLINE WITH ETHANOL, OXYGENATED UNLEADED AUTOMOTIVE GASOLINE CONTAINING ETHANOL, GASOLINE REGULAR UNLEADED RUL87 DYED WITH ETHANOL

---PRECAUTIONARY LABEL TEXT---
Contains: GASOLINE, BENZENE

DANGER!

HEALTH HAZARDS
Irritating to skin. If swallowed, may be aspirated and cause lung damage. Prolonged and repeated exposure to benzene may cause serious injury to blood forming organs and is associated with anemia and to the later development of acute myelogenous leukemia (AML).

Target Organs: Lung | Skin |

PHYSICAL HAZARDS
Extremely flammable. Material can accumulate static charges which may cause an ignition. Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited.

PRECAUTIONS
Avoid breathing mists or vapors. Avoid contact with skin. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Do not siphon by mouth. Use only with adequate ventilation. Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation.

FIRST AID
Inhalation: Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Eye: Flush thoroughly with water. If irritation occurs, get medical assistance.

Oral: Seek immediate medical attention. Do not induce vomiting.

Skin: Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

FIRE FIGHTING MEDIA
Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

SPILL/LEAK
Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Prevent entry into waterways, sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.

Water Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. Do not confine in area of spill. Advise occupants and shipping in downwind areas of fire and explosion hazard and warn them to stay clear. Allow liquid to evaporate from the surface. Seek the advice of a specialist before using dispersants.

This warning is given to comply with California Health and Safety Code 25249.6 and does not constitute an admission or a waiver of rights. This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm. Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm are created by the combustion of this product.
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PPEC: CF

DGN: 5010467 (1013577)

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