Material Safety Data Sheet

Section I. Chemical Product and Company Identification

Product Name: GASOLINE, UNLEADED

Synonym: Regular, Unleaded Gasoline (US Grade), Mid-Grade, Plus, WinterGas, SummerGas, Supreme, SuperClean WinterGas, RegularClean, PlusClean, Premium, marked or dyed gasoline, Super Premium (94 RO)

Manufacturer: PETRO-CANADA
P.O. Box 2844
Calgary, Alberta
T2P 3E3

Material Uses: Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and recreational vehicles.

Section II. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>% (V/V)</th>
<th>TLV-TWA/8 h</th>
<th>STEL</th>
<th>CEILING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Gasoline</td>
<td>8006-61-9</td>
<td>85-100</td>
<td>300 ppm (890 mg/m³)</td>
<td>500 ppm (1480 mg/m³)</td>
<td>Not established</td>
</tr>
<tr>
<td>2) Methyl tert-butly ether</td>
<td>1634-04-4</td>
<td>0-15</td>
<td>40 ppm (144mg/m³)</td>
<td>Not established</td>
<td>Not established</td>
</tr>
</tbody>
</table>

Manufacturer Recommendation: Not applicable

Other Exposure Limits: Consult local, state, provincial or territory authorities for acceptable exposure limits.

Section III. Hazards Identification

Potential Health Effects: Possible cancer hazard. Inhalation of vapours can be irritating to respiratory tract and cause CNS depression with symptoms of nausea, headaches, vomiting, dizziness, fatigue, light-headedness, reduced coordination, unconsciousness and possibly death. Skin and eye contact can cause irritation. Toxic if ingested. For more information, refer to Section 11.

Section IV. First Aid Measures

Eye Contact: IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.

Skin Contact: Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Seek medical attention.

Inhalation: Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform artificial respiration. Allow the victim to rest in a well ventilated area. Seek medical attention.

Ingestion: DO NOT induce vomiting because of danger of aspirating liquid into lungs. Seek medical attention.

Note to Physician: Not available

Section V. Fire-fighting Measures

Flammability: Flammable liquid (NFPA).

Flammable Limits: Lower: 1.3%; Upper: 7.6% (NFPA).

Flash Points: Closed Cup: -50 to -38°C (-58 to -36°F), ASTM D56 Standard Test Method for Flash Point by Tag Closed Tester.

Auto-Ignition Temperature: 257°C (495°F) (NFPA).

Explosion Hazards in Presence of Various Substances: Do not cut, weld, heat, drill or pressurize empty container. Containers may explode in heat of fire. Vapours may form explosive mixtures with air.

Products of Combustion: Carbon oxides (CO, CO₂), nitrogen oxides (NOₓ), polynuclear aromatic hydrocarbons, phenols, smoke and irritating vapours as products of incomplete combustion.

Continued on Next Page Available in French
**Section VI. Accidental Release Measures**

**Material Release or Spill**

NAERG96. GUIDE 128, flammable/combustible liquid (non-polar/water-immiscible). Evacuate in a downwind direction for at least 300 meters (1000 feet). ELIMINATE ALL IGNITION SOURCES. Ventilate closed spaces before entering. By forced ventilation, maintain concentration of vapour below the range of explosive mixture. Avoid contact, fully-encapsulating, vapour-protective clothing should be worn for spills and leaks with no fire. Stop leak if without risk. Use vapour suppressing foam or water spray to reduce vapours; it may reduce vapour, but it may not prevent ignition in closed spaces; isolate area until vapour has dispersed. Contain spill. Absorb with inert absorbents such as dry clay, or diatomaceous earth, or recover using electrically grounded explosion-proof pumps. Avoid inhaling dust of diatomaceous earth for it may contain silica (very fine particle size), making this a potential respiratory hazard. Place used absorbent in closed metal containers for later disposal or burn absorbent in a suitable combustion chamber. DO NOT FLUSH TO SEWERS, STREAMS OR OTHER BODIES OF WATER. Check with applicable jurisdiction for specific disposal requirements of spilled material and empty containers. Notify the appropriate authorities immediately.

**Section VII. Handling and Storage**

**Handling**

Keep away from heat, spark and other sources of ignition. Empty container may contain flammable/explosive residues or vapours. DO NOT reuse empty containers without commercial cleaning or reconditioning. Ground/bond line and equipment during pumping or transfer to avoid accumulation of static charge. DO NOT USE AS CLEANING FLUID OR SIPHON BY MOUTH. Wear proper protective equipment. Avoid inhalation and contact with skin or eyes. Practice good personal hygiene. Wash hands after handling and before eating. Launder work clothes frequently. Discard saturated leather goods. Use proper general ventilation, maintain concentration of vapour below the range of explosive mixture. Avoid contact, fully-encapsulating, vapour-protective clothing should be worn for spills and leaks with no fire. Stop leak if without risk. Use vapour suppressing foam or water spray to reduce vapours; it may reduce vapour, but it may not prevent ignition in closed spaces; isolate area until vapour has dispersed. Contain spill. Absorb with inert absorbents such as dry clay, or diatomaceous earth, or recover using electrically grounded explosion-proof pumps. Avoid inhaling dust of diatomaceous earth for it may contain silica (very fine particle size), making this a potential respiratory hazard.

**Storage**

Store in cool, dry, isolated, well-ventilated area, and away from direct sunlight, sources of ignition and incompatibles. Flammable materials should be stored in a separate safety storage cabinet or room. Ground all equipment containing material.

**Section VIII. Exposure Controls/Personal Protection**

**Engineering Controls**

For normal application, special ventilation is not necessary. If user's operations generate vapours or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.

**Personal Protection**

- **Eyes**
  - Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use. If product is used in an application where splashing may occur, the use of safety goggles and/or a face shield should be considered.

- **Body**
  - Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn.

- **Respiratory**
  - Where concentrations in air may exceed the occupational exposure limits given in Section 2 (and those applicable to your area) and where engineering, work practices or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation.

- **Hands**
  - Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated.

- **Feet**
  - Wear appropriate footwear to prevent product from coming in contact with feet and skin.

**Section IX. Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State and Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>0.6 cSt.</td>
</tr>
<tr>
<td>Colour</td>
<td>Clear to slightly yellow, undyed liquid. May be dyed red for taxation purposes.</td>
</tr>
<tr>
<td>Odour</td>
<td>Gasoline. MTBE has a terpene-like odour.</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Less than 1 ppm.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>25 to 220°C (77 to 428°F) Initial boiling point by ASTM D86 Standard Test Method.</td>
</tr>
<tr>
<td>Density</td>
<td>0.7 kg/L @ 15°C (59°F).</td>
</tr>
<tr>
<td>Vapour Density</td>
<td>3 to 4 (Air = 1) (NFPA).</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>107 kPa @ 37.8°C (100°F)</td>
</tr>
<tr>
<td>Volatility</td>
<td>Volatile.</td>
</tr>
<tr>
<td>Solubility</td>
<td>Hydrocarbon components virtually insoluble in water. Soluble in alcohol, ether, chloroform, and benzene. Dissolves fats, oils and natural resins.</td>
</tr>
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Section X. Stability and Reactivity

<table>
<thead>
<tr>
<th>Corrosivity</th>
<th>Stability</th>
<th>Hazardous Polymerization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non corrosive.</td>
<td>The product is stable under normal handling and storage conditions.</td>
<td>Will not occur under normal working conditions.</td>
</tr>
</tbody>
</table>

Incompatible Substances / Conditions to Avoid

<table>
<thead>
<tr>
<th>Decomposition Products</th>
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<tbody>
<tr>
<td>Reactive with oxidizing agents, acids.</td>
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</tbody>
</table>

May release COx, NOx, phenols, polynuclear aromatic hydrocarbons, smoke and irritating vapours when heated to decomposition.

Section XI. Toxicological Information

Routes of Entry

Skin contact, eye contact, inhalation, and ingestion.

Acute Lethality

Gasoline: Acute oral toxicity (LD50): 13 600 mg/kg (rat).
Acute dermal toxicity (LD50): >5000 mg/kg (rabbit).
Acute inhalation toxicity (LC50): >300 000 mg/m³/4h (rat).

MTBE: Acute oral toxicity (LD50): 29630 mg/kg (rat).
Acute dermal toxicity (LD50): >6800 mg/kg (rabbit).
Acute inhalation toxicity (LC50): 23 576 ppm/4h (rat).

Chronic or Other Toxic Effects

Dermal Route:

This product can cause skin irritation. Prolonged or repeated contact with skin may cause dermatitis.

Inhalation Route:

Inhalation of vapours can be irritating to respiratory tract and cause CNS depression with symptoms of nausea, headaches, vomiting, dizziness, fatigue, light-headedness, reduced coordination, unconsciousness and possibly death.

Oral Route:

Swallowing or vomiting of the liquid may result in aspiration into the lungs. Can cause CNS depression. (See Inhalation Route for symptoms).

Eye Irritation/Inflammation:

Can cause irritation to the eyes.

Immunotoxicity:

Not available

Skin Sensitization:

This product is not expected to be a skin sensitizer, based on the available data and the known hazards of the components.

Respiratory Tract Sensitization:

This product is not expected to be a respiratory tract sensitizer, based on the available data and the known hazards of the components.

Mutagenic:

This product is not considered to be a mutagen, based on the available data and the known hazards of the components.

Reproductive Toxicity:

This product is not considered to be a reproductive hazard, based on the available data and the known hazards of the components.

Teratogenicity/Embryotoxicity:

This product is not considered to be a teratogen or an embryotoxin, based on the available data and the known hazards of the components.

Carcinogenicity (ACGIH):

ACGIH A3: animal carcinogen. [Gasoline, MTBE]

Carcinogenicity (IARC):

IARC Group 2B: possibly carcinogenic to humans. [Gasoline]

Carcinogenicity (NTP):

This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.

Carcinogenicity (IRIS):

Not available

Carcinogenicity (OSHA):

This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.

Other Considerations

Unleaded gasoline caused kidney effects in male rats and liver effects in female mice.

Section XII. Ecological Information

Environmental Fate

Not available

Persistance / Bioaccumulation Potential

Not available

BOD5 and COD

Not available

Products of Biodegradation

Not available

Additional Remarks

Not available

Section XIII. Disposal Considerations

Waste Disposal

Preferred waste management priorities are: (1) recycle or reprocess; (2) incineration with energy recovery; (3) disposal at licensed waste disposal facility. Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations. Consult your local or regional authorities.
### Section XIV. Transport Information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>Special Provisions for Transport</th>
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<tbody>
<tr>
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<td></td>
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</table>

### Section XV. Regulatory Information

<table>
<thead>
<tr>
<th>Other Regulations</th>
<th>Special Provisions for Transport</th>
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</thead>
<tbody>
<tr>
<td>CEPA: This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed on the CEPA-DSL (Domestic Substances List). EPA: All components of this formulation are listed on the US EPA-TSCA Inventory. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. Please contact Product Safety for more information.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DSD/DPD (EEC)</th>
<th>WHMIS (Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not evaluated.</td>
<td>B-2, D-2A, D-2B</td>
</tr>
</tbody>
</table>

### Section XVI. Other Information

<table>
<thead>
<tr>
<th>References</th>
<th>Available upon request.</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Marque de commerce de Petro-Canada - Trademark</td>
<td></td>
</tr>
</tbody>
</table>

#### Glossary

- ACGIH - American Conference of Governmental Industrial Hygienists
- ADR - Agreement on Dangerous goods by Road (Europe)
- ASTM - American Society for Testing and Materials ()
- BOD5 - Biological Oxygen Demand in 5 days
- CAN/CGA B149.2 - Propane Installation Code
- CAS - Chemical Abstract Services
- CEPA - Canadian Environmental Protection Act
- CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
- CFR - Code of Federal Regulations
- ChemHazard Information and Packaging Approved Supply List
- COD5 - Chemical Oxygen Demand in 5 days
- CPR - Controlled Products Regulations
- DOT - Department of Transport
- DSCL - Dangerous Substances Classification and Labeling (Europe)
- DSD/DPD - Dangerous Substances or Dangerous Preparations Directives (Europe)
- DSL - Domestic Substance List
- EEC/EU - European Economic Community/European Union
- EINECS - European Inventory of Existing Commercial Chemical Substances
- EPCRA - Emergency Planning and Community Right to Know Act
- FDA - Food and Drug Administration
- FIFRA - Federal Insecticide, Fungicide and Rodenticide Act
- HCS - Hazardous Communication System
- HMIS - Hazardous Material Information System
- IARC - International Agency for Research on Cancer
- IRIS - Integrated Risk Information System
- LD50/LC50 - Lethal Dose/Concentration kill 50%
- LDLo/LCLo - Lowest Published Lethal Dose/Concentration
- NIOSH - National Institute for Occupational Safety & Health
- NPR - National Pollutant Release Inventory
- NSNR - New Substances Notification Regulations (Canada)
- NTP - National Toxicology Program
- OSHA - Occupational Safety & Health Administration
- PEL - Permissible Exposure Limit
- RCRA - Resource Conservation and Recovery Act
- SD - Single Dose
- STEL - Short Term Exposure Limit (15 minutes)
- TDG - Transportation Dangerous Goods (Canada)
- TDLo/TCLo - Lowest Published Toxic Dose/Concentration
- TLm - Median Tolerance Limit
- TLM-TWA - Threshold Limit Value-Time Weighted Average
- TSCA - Toxic Substances Control Act
- USEPA - United States Environmental Protection Agency
- USP - United States Pharmacopoeia
- WHMIS - Workplace Hazardous Material Information System

#### For Copy of MSDS

- Fuels & Solvents:
  - Western Canada, telephone: 403-296-4158; fax: 403-296-6551
  - Ontario & Central Canada, telephone: 1-800-668-0220; fax: 1-800-837-1228
  - Quebec & Eastern Canada, telephone: 514-640-8308; fax: 514-640-8385
- For Product Safety Information: (905) 804-4752


Data entry by Product Safety - TAR.