



Product Name: UNLEADED GASOLINE  
Revision Date: 01 Oct 2018  
Page 1 of 15

# SAFETY DATA SHEET

## SECTION 1 IDENTIFICATION

### PRODUCT

**Product Name:** UNLEADED GASOLINE  
**Product Description:** Hydrocarbons and Additives  
**SDS Number:** 8522

**Intended Use:** Fuel

| Trade Names                               | Trade Names                                |
|-------------------------------------------|--------------------------------------------|
| AUTOMOTIVE GASOLINE                       | ESSO EXTRA GASOLINE                        |
| ESSO MIDGRADE GASOLINE                    | ESSO PREMIUM GASOLINE                      |
| ESSO REGULAR GASOLINE                     | ESSO SUPREME GASOLINE                      |
| EXXON MIDGRADE GASOLINE                   | EXXON PREMIUM GASOLINE                     |
| EXXON REGULAR GASOLINE                    | GASOLINE MIDGRADE UNLEADED MUL89           |
| GASOLINE MIDGRADE UNLEADED MUL89 DCA      | GASOLINE MIDGRADE UNLEADED MUL89 DCA DYED  |
| GASOLINE MIDGRADE UNLEADED MUL89 LDCA     | GASOLINE MIDGRADE UNLEADED MUL89 LDCA DYED |
| GASOLINE PREMIUM UNLEADED PUL91           | GASOLINE PREMIUM UNLEADED PUL91 DCA        |
| GASOLINE PREMIUM UNLEADED PUL91 DCA DYED  | GASOLINE PREMIUM UNLEADED PUL91 LDCA       |
| GASOLINE PREMIUM UNLEADED PUL91 LDCA DYED | GASOLINE RBOB BLENDSTOCK P91               |
| GASOLINE RBOB BLENDSTOCK R87              | GASOLINE REGULAR UNLEADED RUL87            |
| GASOLINE REGULAR UNLEADED RUL87 DCA       | GASOLINE REGULAR UNLEADED RUL87 DCA DYED   |
| GASOLINE REGULAR UNLEADED RUL87 DYED      | GASOLINE REGULAR UNLEADED RUL87 LDCA       |
| GASOLINE REGULAR UNLEADED RUL87 LDCA DYED |                                            |

### COMPANY IDENTIFICATION

|                                              |                                                                                                  |
|----------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Supplier:</b>                             | <b>Imperial Oil Downstream</b><br>P.O. Box 2480, Station M<br>Calgary, ALBERTA T2P 3M9<br>Canada |
| <b>24 Hour Emergency Telephone</b>           | 1-866-232-9563                                                                                   |
| <b>Transportation Emergency Phone Number</b> | 1-866-232-9563                                                                                   |
| <b>Product Technical Information</b>         | 1-800-268-3183                                                                                   |
| <b>Supplier General Contact</b>              | 1-800-567-3776                                                                                   |

## SECTION 2 HAZARD IDENTIFICATION

This material is considered to be hazardous according to regulatory guidelines.

This product has been classified in accordance with hazard criteria of the Hazardous Products Regulations (HPR) SOR/2015-17 and the SDS contains all the information required by the HPR SOR/2015-17.

## CLASSIFICATION:

Flammable Liquids — Category 1  
Skin Irritation — Category 2  
Germ Cell Mutagenicity — Category 1B  
Carcinogenicity — Category 1B  
Reproductive Toxicity (Developmental) — Category 2  
Specific Target Organ Toxicity — Single Exposure (Central Nervous System) — Category 3  
Aspiration Hazard — Category 1

## LABEL:

### Pictogram:



**Signal Word:** Danger

### Hazard Statements:

H224: Extremely flammable liquid and vapour. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. H340: May cause genetic defects. H350: May cause cancer. H361: Suspected of damaging the unborn child.

### Precautionary Statements:

P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P103: Read label before use. P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233: Keep container tightly closed. P240: Ground and bond container and receiving equipment. P241: Use explosion-proof electrical, ventilating and lighting equipment. P242: Use non-sparking tools. P243: Take action to prevent static discharges. P261: Avoid breathing mist / vapours. P264: Wash skin thoroughly after handling. 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. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304 + P340: IF INHALED: Remove person to fresh air and keep 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. P331: Do NOT induce vomiting. P332 + P313: If skin irritation occurs: Get medical advice/attention. P362 + P364: Take off contaminated clothing and wash it before reuse. P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish. P391: Collect spillage. P403 + P235: Store in a well-ventilated place. Keep cool. P405: Store locked up. P501: Dispose of contents and container in accordance with local regulations.

**Contains:** Benzene; GASOLINE; Toluene

#### Other hazard information:

**Health Hazards Not Otherwise Classified:** None as defined under HPR SOR/2015-17.

**Physical Hazards Not Otherwise Classified:** None as defined under HPR SOR/2015-17.

#### PHYSICAL / CHEMICAL HAZARDS

Material can accumulate static charges which may cause an ignition. Material can release vapours that readily form flammable mixtures. Vapour accumulation could flash and/or explode if ignited.

#### HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. May be irritating to the eyes, nose, throat, and lungs. May cause central nervous system depression. Exposure to benzene is associated with cancer (acute myeloid leukaemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders (see Section 11).

#### ENVIRONMENTAL HAZARDS

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

|                        |            |                 |               |
|------------------------|------------|-----------------|---------------|
| <b>NFPA Hazard ID:</b> | Health: 2  | Flammability: 3 | Reactivity: 0 |
| <b>HMIS Hazard ID:</b> | Health: 2* | Flammability: 3 | Reactivity: 0 |

**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 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

#### Hazardous Substance(s) or Complex Substance(s) in Hazardous product

| Name          | CAS#       | Concentration* | GHS Hazard Codes                                                |
|---------------|------------|----------------|-----------------------------------------------------------------|
| ETHYL ALCOHOL | 64-17-5    | 0 - 1%         | H225, H319(2A)                                                  |
| GASOLINE      | 86290-81-5 | 98 - 100%      | H224, H304, H336, H340(1B), H350(1B), H361(D), H315, H401, H411 |

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

| Name          | CAS#     | Concentration* | GHS Hazard Codes                                                 |
|---------------|----------|----------------|------------------------------------------------------------------|
| Benzene       | 71-43-2  | 0 - 1.5%       | H225, H303, H304, H340(1B), H350(1A), H315, H319(2A), H372, H401 |
| CUMENE        | 98-82-8  | 0 - 1%         | H226, H304, H335, H351, H401, H411                               |
| CYCLOHEXANE   | 110-82-7 | 0 - 1.5%       | H225, H304, H336, H315, H400(M factor 1), H410(M factor 1)       |
| ETHYL BENZENE | 100-41-4 | 0 - 3.5%       | H225, H332, H373, H401,                                          |



Product Name: UNLEADED GASOLINE  
Revision Date: 01 Oct 2018  
Page 4 of 15

|             |           |         |                                                          |
|-------------|-----------|---------|----------------------------------------------------------|
|             |           |         | H412                                                     |
| n-Hexane    | 110-54-3  | 0 - 5%  | H225, H304, H336, H361(F), H315, H373, H401, H411        |
| Naphthalene | 91-20-3   | 0 - 1%  | H302, H351, H400(M factor 1), H410(M factor 1)           |
| Toluene     | 108-88-3  | 0 - 20% | H225, H304, H336, H361(D), H315, H373, H401, H412        |
| XYLENES     | 1330-20-7 | 0 - 20% | H226, H304, H312, H332, H335, H315, H320(2B), H373, H401 |

\* All concentrations are percent by weight unless ingredient 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.

#### **SECTION 4 FIRST-AID MEASURES**

##### **INHALATION**

Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

##### **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. This material, or a component, may be associated with cardiac sensitization following very high exposures (well above occupational exposure limits) or with concurrent exposure to high stress levels or heart-stimulating substances like epinephrine. Administration of such substances should be avoided.

#### **SECTION 5 FIRE-FIGHTING MEASURES**

##### **EXTINGUISHING MEDIA**

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) 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 vapours and to protect personnel attempting to stop a leak. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters 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. Vapour is flammable and heavier than air. Vapour 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:** Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, Sulphur oxides

## FLAMMABILITY PROPERTIES

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

**Flammable Limits (Approximate volume % in air):** LEL: 1.4 UEL: 7.6

**Autoignition Temperature:** >250°C (482°F)

## 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.

### 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 advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

For emergency responders: Respiratory protection: half-face or full-face respirator with filter(s) for organic vapor and, when applicable, H<sub>2</sub>S, or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to aromatic hydrocarbons are recommended. Note: gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills: normal antistatic work clothes are usually adequate. Large spills: full body suit of chemical resistant, antistatic material is recommended.

### SPILL MANAGEMENT

**Land Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so 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

vapour-suppressing foam may be used to reduce vapour. 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 vapour, but may not prevent ignition in enclosed spaces.

**Water Spill:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so 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: Dyke 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 all personal contact. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapour 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 petrol into unapproved containers. Do not fill container while it is in or on a vehicle. Static electricity may ignite vapour 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 fuelling 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 ( $100 \times 10^{-12}$  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 type of container used to store the material may affect 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 earthed and bonded.

Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE LIMIT VALUES

| Substance Name | Form | Limit/Standard |          |  | Note | Source   |
|----------------|------|----------------|----------|--|------|----------|
| Benzene        |      | STEL           | 1 ppm    |  |      | Supplier |
| Benzene        |      | TWA            | 0.5 ppm  |  |      | Supplier |
| Benzene        |      | STEL           | 2.5 ppm  |  | Skin | ACGIH    |
| Benzene        |      | TWA            | 0.5 ppm  |  | Skin | ACGIH    |
| CUMENE         |      | TWA            | 5 ppm    |  | Skin | Supplier |
| CUMENE         |      | TWA            | 50 ppm   |  |      | ACGIH    |
| CYCLOHEXANE    |      | TWA            | 100 ppm  |  |      | ACGIH    |
| ETHYL ALCOHOL  |      | STEL           | 1000 ppm |  |      | ACGIH    |
| ETHYL BENZENE  |      | TWA            | 20 ppm   |  |      | ACGIH    |
| GASOLINE       |      | STEL           | 200 ppm  |  |      | Supplier |
| GASOLINE       |      | TWA            | 100 ppm  |  |      | Supplier |
| GASOLINE       |      | STEL           | 500 ppm  |  |      | ACGIH    |
| GASOLINE       |      | TWA            | 300 ppm  |  |      | ACGIH    |
| n-Hexane       |      | TWA            | 50 ppm   |  | Skin | ACGIH    |
| Naphthalene    |      | TWA            | 10 ppm   |  | Skin | ACGIH    |
| Toluene        |      | TWA            | 20 ppm   |  |      | ACGIH    |
| XYLENES        |      | STEL           | 150 ppm  |  |      | ACGIH    |
| XYLENES        |      | TWA            | 100 ppm  |  |      | ACGIH    |

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 protection is ordinarily required under normal 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/vapour 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:

Chemical resistant gloves are recommended.

**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:

Chemical/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. Practise good housekeeping.

## ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

|                  |                                         |
|------------------|-----------------------------------------|
| <b>SECTION 9</b> | <b>PHYSICAL AND CHEMICAL PROPERTIES</b> |
|------------------|-----------------------------------------|

**Note:** Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

## GENERAL INFORMATION

**Physical State:** Liquid  
**Colour:** Clear (May Be Dyed)  
**Odour:** Petroleum/Solvent  
**Odour Threshold:** N/D

## IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 °C):** 0.74  
**Flammability (Solid, Gas):** N/A  
**Flash Point [Method]:** -40°C (-40°F) [ASTM D-92]  
**Flammable Limits (Approximate volume % in air):** LEL: 1.4 UEL: 7.6  
**Autoignition Temperature:** >250°C (482°F)  
**Boiling Point / Range:** > 20°C (68°F) - 225°C (437°F)  
**Decomposition Temperature:** N/D  
**Vapour Density (Air = 1):** 3.2 at 101 kPa



**Vapour Pressure:** > 26.6 kPa (200 mm Hg) at 20°C | 76 kPa (570 mm Hg) at 38 °C - 103 kPa (772.5 mm Hg) at 38°C  
**Evaporation Rate (n-butyl acetate = 1):** > 10  
**pH:** N/A  
**Log Pow (n-Octanol/Water Partition Coefficient):** > 3  
**Solubility in Water:** Negligible  
**Viscosity:** <1 cSt (1 mm<sup>2</sup>/sec) at 40°C  
**Oxidizing Properties:** See Hazards Identification Section.

#### OTHER INFORMATION

**Freezing Point:** N/D  
**Melting Point:** N/A

### 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:** Alkalies, Halogens, Strong Acids, Strong oxidizers

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

**POSSIBILITY OF HAZARDOUS REACTIONS:** Hazardous polymerization will not occur.

### SECTION 11 TOXICOLOGICAL INFORMATION

#### INFORMATION ON TOXICOLOGICAL EFFECTS

| <b>Hazard Class</b>                                                    | <b>Conclusion / Remarks</b>                                                                                                                                  |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                                                      |                                                                                                                                                              |
| Acute Toxicity: (Rat) 4 hour(s) LC50 > 5000 mg/m <sup>3</sup> (Vapour) | Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403                                  |
| Irritation: No end point data for material.                            | Elevated temperatures or mechanical action may form vapours, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs.                     |
| <b>Ingestion</b>                                                       |                                                                                                                                                              |
| Acute Toxicity (Rat): LD50 > 5000 mg/kg                                | Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401                                  |
| <b>Skin</b>                                                            |                                                                                                                                                              |
| Acute Toxicity (Rabbit): LD50 > 2000 mg/kg                             | Minimally Toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402                                  |
| Skin Corrosion/Irritation: No end point data for material.             | Irritating to the skin. Based on test data for structurally similar materials.                                                                               |
| <b>Eye</b>                                                             |                                                                                                                                                              |
| Serious Eye Damage/Irritation: No end point data for material.         | May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405 |
| <b>Sensitisation</b>                                                   |                                                                                                                                                              |
| Respiratory Sensitization: No end point data                           | Not expected to be a respiratory sensitizer.                                                                                                                 |

Product Name: UNLEADED GASOLINE  
Revision Date: 01 Oct 2018  
Page 10 of 15

|                                                   |                                                                                                                                                                                                            |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| for material.                                     |                                                                                                                                                                                                            |
| Skin Sensitization: Data available.               | Not expected to be a skin sensitizer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 406                                                           |
| <b>Aspiration:</b> Data available.                | May be fatal if swallowed and enters airways. Based on physico-chemical properties of the material.                                                                                                        |
| <b>Germ Cell Mutagenicity:</b> Data available.    | Caused genetic effects in laboratory animals, but the relevance to humans is uncertain. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 471 475 476 |
| <b>Carcinogenicity:</b> Data available.           | Caused cancer in laboratory animals. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 451                                                            |
| <b>Reproductive Toxicity:</b> Data available.     | Caused damage to the fetus in laboratory animals, but the relevance to humans is uncertain. Based on assessment of the components.                                                                         |
| <b>Lactation:</b> No end point data for material. | Not expected to cause harm to breast-fed children.                                                                                                                                                         |
| <b>Specific Target Organ Toxicity (STOT)</b>      |                                                                                                                                                                                                            |
| Single Exposure: No end point data for material.  | May cause drowsiness or dizziness.                                                                                                                                                                         |
| Repeated Exposure: Data available.                | Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 410 412 453                 |

## TOXICITY FOR SUBSTANCES

| NAME          | ACUTE TOXICITY                                                                                                              |
|---------------|-----------------------------------------------------------------------------------------------------------------------------|
| ETHYL BENZENE | Inhalation Lethality: 4 hour(s) LC50 17.8 mg/l (Vapour) (Rat); Oral Lethality: LD 50 3.5 g/kg (Rat)                         |
| Naphthalene   | Inhalation Lethality: 4 hour(s) LC50 > 0.4 mg/l (Max attainable vapor conc.) (Rat); Oral Lethality: LD 50 533 mg/kg (Mouse) |

## OTHER INFORMATION

### For the product itself:

Laboratory animal studies have shown that prolonged and repeated inhalation exposure to light hydrocarbon vapours 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. Vapour concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anaesthetic 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. Exposure to this material, or one of its components, in situations where there is the potential for high levels, such as in confined spaces or with abuse, may result in abnormal heart rhythm (arrhythmia). High-level exposure to hydrocarbons (above occupational exposure limits) may initiate arrhythmia in a worker that is undergoing stress or is taking a heart-stimulating substance such as epinephrine, a nasal decongestant, or an asthma or cardiovascular drug.

### Contains:

**BENZENE:** Caused cancer (acute myeloid leukemia and myelodysplastic syndrome), damage to the blood-producing system, and serious blood disorders in human studies. Caused genetic effects and effects on the immune system in laboratory animal and some human studies. Caused toxicity to the fetus and cancer in laboratory animal studies.

**CUMENE:** Repeated inhalation exposure of cumene vapour 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 vapour 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:** Carcinogenic in animal tests. Chronic inhalation studies resulted in liver tumours in female mice and kidney tumours 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). **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.

#### CMR Status:

| Chemical Name | CAS Number | List Citations |
|---------------|------------|----------------|
| Benzene       | 71-43-2    | 1, 4, 5        |
| CUMENE        | 98-82-8    | 3, 4           |
| CYCLOHEXANE   | 110-82-7   | 4              |
| ETHYL ALCOHOL | 64-17-5    | 4              |
| ETHYL BENZENE | 100-41-4   | 3, 4           |
| GASOLINE      | 86290-81-5 | 3, 4           |
| n-Hexane      | 110-54-3   | 4              |
| Naphthalene   | 91-20-3    | 3, 4           |
| Toluene       | 108-88-3   | 4              |
| XYLENES       | 1330-20-7  | 4              |

#### --REGULATORY LISTS SEARCHED--

1 = IARC 1  
2 = IARC 2A

3 = IARC 2B  
4 = ACGIH ALL

5 = ACGIH A1  
6 = ACGIH A2

## SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data for the material, components of the material, or for similar materials, through the application of bridging principals.

#### 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**

**Empty Container Warning** Empty Container Warning (where applicable): 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 IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

### **SECTION 14**

### **TRANSPORT INFORMATION**

#### **LAND (TDG)**

**Proper Shipping Name:** GASOLINE  
**Hazard Class & Division:** 3  
**UN Number:** 1203

---

**Packing Group:** II  
**Marine Pollutant:** Yes  
**Special Provisions:** 17, 88, 98, 150

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

#### 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

#### 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  
**Marine Pollutant:** No  
**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  
**UN Number:** 1203  
**Packing Group:** II  
**Label(s) / Mark(s):** 3  
**Transport Document Name:** UN1203, GASOLINE, 3, PG II

|                   |
|-------------------|
| <b>SECTION 15</b> |
|-------------------|

|                               |
|-------------------------------|
| <b>REGULATORY INFORMATION</b> |
|-------------------------------|

**CEPA:** All components of this product are either on the Domestic Substance List (DSL) or are exempt.

**Listed or exempt from listing/notification on the following chemical inventories (May contain substance(s) subject to notification to the EPA Active TSCA inventory prior to import to USA):** AICS, DSL, ENCS, KECI, PICCS, TSCA

**The Following Ingredients are Cited on the Lists Below:**

Product Name: UNLEADED GASOLINE  
Revision Date: 01 Oct 2018  
Page 14 of 15

| Chemical Name | CAS Number | List Citations |
|---------------|------------|----------------|
| Benzene       | 71-43-2    | 6              |
| CUMENE        | 98-82-8    | 6              |
| CYCLOHEXANE   | 110-82-7   | 6              |
| ETHYL BENZENE | 100-41-4   | 6              |
| n-Hexane      | 110-54-3   | 6              |
| Naphthalene   | 91-20-3    | 6              |
| Toluene       | 108-88-3   | 6              |
| XYLENES       | 1330-20-7  | 6              |

--REGULATORY LISTS SEARCHED--

1 = TSCA 4  
2 = TSCA 5a2

3 = TSCA 5e  
4 = TSCA 6

5 = TSCA 12b  
6 = NPRI

**SECTION 16 OTHER INFORMATION**

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

**KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):**

H224: Extremely flammable liquid and vapor; Flammable Liquid, Cat 1  
H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2  
H226: Flammable liquid and vapour; Flammable Liquid, Cat 3  
H302: Harmful if swallowed; Acute Tox Oral, Cat 4  
H303: May be harmful if swallowed; Acute Tox Oral, Cat 5  
H304: May be fatal if swallowed and enters airways; Aspiration, Cat 1  
H312: Harmful in contact with skin; Acute Tox Dermal, Cat 4  
H315: Causes skin irritation; Skin Corr/Irritation, Cat 2  
H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr, Cat 2A  
H320(2B): Causes eye irritation; Serious Eye Damage/Irr, Cat 2B  
H332: Harmful if inhaled; Acute Tox Inh, Cat 4  
H335: May cause respiratory irritation; Target Organ Single, Resp Irr  
H336: May cause drowsiness or dizziness; Target Organ Single, Narcotic  
H340(1B): May cause genetic defects; Germ Cell Mutagenicity, Cat 1B  
H350(1A): May cause cancer; Carcinogenicity, Cat 1A  
H350(1B): May cause cancer; Carcinogenicity, Cat 1B  
H351: Suspected of causing cancer; GHS Carcinogenicity, Cat 2  
H361(D): Suspected of damaging the unborn child; Repro Tox, Cat 2 (Develop)  
H361(F): Suspected of damaging fertility; Repro Tox, Cat 2 (Fertility)  
H372: Causes damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 1  
H373: May cause damage to organs through prolonged or repeated exposure; Target Organ, Repeated, Cat 2  
H400: Very toxic to aquatic life; Acute Env Tox, Cat 1  
H401: Toxic to aquatic life; Acute Env Tox, Cat 2  
H410: Very toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 1  
H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2  
H412: Harmful to aquatic life with long lasting effects; Chronic Env Tox, Cat 3

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**



Product Name: UNLEADED GASOLINE  
Revision Date: 01 Oct 2018  
Page 15 of 15

---

Updates made in accordance with implementation of GHS requirements.

---

The information and recommendations contained herein are, to the best of Imperial Oil's knowledge and belief, accurate and reliable as of the date issued. Imperial Oil assumes no responsibility for accuracy of information unless the document is the most current available from an official Imperial Oil distribution system. The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product, legal counsel should be consulted to insure proper health, safety and other necessary information is included on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or retransmission of this document, in whole or in part, is not permitted.

---

DGN: 5007481 (1006754)

---

Copyright 2002 Imperial Oil Limited, All rights reserved