Safety Data Sheet

SECTION 1  PRODUCT AND COMPANY IDENTIFICATION

CHEVRON and TEXACO MID-GRADE UNLEADED GASOLINES

Product Use: Fuel
Product Number(s): CPS201001 [See Section 16 for Additional Product Numbers]
Synonyms: Calco Mid-Grade Unleaded Gasoline, Chevron Mid-Grade Unleaded Gasoline, Chevron Plus Unleaded Gasoline, Texaco Power Plus Gasoline

Company Identification
Chevron Products Company
Marketing, MSDS Coordinator
6001 Bollinger Canyon Road
San Ramon, CA 94583
United States of America

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887

Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

Product Information
MSDS Requests: http://www.chevron.com/contact
Technical Information: (510) 242-5357

SPECIAL NOTES: This MSDS applies to: all motor gasoline.

SECTION 2  HAZARDS IDENTIFICATION

CLASSIFICATION:

Signal Word: Danger

Physical Hazards: Highly flammable liquid and vapor. 
Health Hazards: May be fatal if swallowed and enters airways. Causes skin irritation. Suspected of causing cancer. May cause respiratory irritation. May cause drowsiness or dizziness. 16% of the mixture consists of ingredient(s) of unknown acute lethality.
Environmental Hazards: Toxic to aquatic life. Toxic to aquatic life with long lasting effects. 16% of the mixture consists of ingredient(s) of unknown hazards to the aquatic environment.

PRECAUTIONARY STATEMENTS:
General: Keep out of reach of children. Read label before use.
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. -- No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting/equipment. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Wash thoroughly after handling. Avoid release to the environment.
Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. IF SWALLOWED: Immediately call a poison center or doctor/physician. Do NOT induce vomiting. Call a poison center or doctor/physician if you feel unwell. IF exposed or concerned: Get medical advice/attention. In case of fire: Use media specified in the MSDS to extinguish. Specific treatment (see Notes to Physician on this label). Collect spillage.
Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NUMBER</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
<td>86290-81-5</td>
<td>100 %vol/vol</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>0.1 - 4.9 %vol/vol</td>
</tr>
<tr>
<td>Toluene (methylbenzene)</td>
<td>108-88-3</td>
<td>1 - 35 %vol/vol</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>100-41-4</td>
<td>0.1 - 3 %vol/vol</td>
</tr>
<tr>
<td>Xylene (contains o-, m-, &amp; p- xylene isomers in varying amounts)</td>
<td>1330-20-7</td>
<td>1 - 15 %vol/vol</td>
</tr>
<tr>
<td>Butane</td>
<td>106-97-8</td>
<td>1 - 12 %vol/vol</td>
</tr>
<tr>
<td>Heptane</td>
<td>142-82-5</td>
<td>1 - 4 %vol/vol</td>
</tr>
<tr>
<td>Hexane</td>
<td>110-54-3</td>
<td>1 - 5 %vol/vol</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>110-82-7</td>
<td>1 - 3 %vol/vol</td>
</tr>
<tr>
<td>Methylcyclohexane</td>
<td>108-87-2</td>
<td>1 - 2 %vol/vol</td>
</tr>
<tr>
<td>Pentane, 2,2,4-trimethyl- (Isooctane)</td>
<td>540-84-1</td>
<td>1 - 13 %vol/vol</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0.1 - 2 %vol/vol</td>
</tr>
<tr>
<td>Ethanol</td>
<td>64-17-5</td>
<td>0 - 10 %vol/vol</td>
</tr>
<tr>
<td>Methyl tert-butyl ether (MTBE)</td>
<td>1634-04-4</td>
<td>&lt;= 0.1 %vol/vol</td>
</tr>
</tbody>
</table>

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. The appropriate CAS number for refinery blended motor gasoline is 86290-81-5. The product specifications of motor gasoline sold in your area will depend on applicable Federal and State regulations.
SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

Skin: Wash skin with water immediately and remove contaminated clothing and shoes. Get medical attention if any symptoms develop. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if breathing difficulties continue or if any other symptoms develop.

Most important symptoms and effects, both acute and delayed

IMMEDIATE SYMPTOMS AND HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Contact with the skin is not expected to cause an allergic skin response. Symptoms may include pain, itching, discoloration, swelling, and blistering. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Because of its low viscosity, this material can directly enter the lungs, if swallowed, or if subsequently vomited. Once in the lungs it is very difficult to remove and can cause severe injury or death.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. Excessive or prolonged breathing of this material may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER SYMPTOMS AND HEALTH EFFECTS: This material is not expected to cause birth defects or other harm to the developing fetus based on animal data. Prolonged or repeated exposure to this material may cause cancer. Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed

Note to Physicians: Ingestion of this product or subsequent vomiting may result in aspiration of light hydrocarbon liquid, which may cause pneumonia.

SECTION 5 FIRE FIGHTING MEASURES

See Section 7 for proper handling and storage.

EXTINGUISHING MEDIA: Dry Chemical, CO2, AFFF Foam or alcohol resistant foam if >15% volume polar solvents (oxygenates).

PROTECTION OF FIRE FIGHTERS: Fire Fighting Instructions: Use water spray to cool fire-exposed containers and to protect personnel. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.
Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

<table>
<thead>
<tr>
<th>SECTION 6  ACCIDENTAL RELEASE MEASURES</th>
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</table>

Protective Measures: Eliminate all sources of ignition in the vicinity of the spill or released vapor. If this material is released into the work area, evacuate the area immediately. Monitor area with combustible gas indicator.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. All equipment used when handling the product must be grounded. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities as appropriate or required.

<table>
<thead>
<tr>
<th>SECTION 7  HANDLING AND STORAGE</th>
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</table>

Precautionary Measures: Do not get in eyes, on skin, or on clothing. This product presents an extreme fire hazard. Liquid very quickly evaporates, even at low temperatures, and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Do not taste or swallow. Do not breathe vapor or fumes. Never siphon gasoline by mouth. Do not store in open or unlabeled containers. READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL. Keep out of the reach of children. Wash thoroughly after handling.

General Storage Information: DO NOT USE OR STORE near heat, sparks, flames, or hot surfaces. USE AND STORE ONLY IN WELL VENTILATED AREA. Keep container closed when not in use.

General Handling Information: Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'. Improper filling of portable gasoline containers creates danger of fire. Only dispense gasoline into approved and properly labeled gasoline containers. Always place portable containers on the ground. Be sure pump nozzle is in contact with the container while filling. Do not use a nozzle's lock-open device. Do not fill portable containers that are inside a vehicle or truck/trailer bed.

Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, 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. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.
SECTION 8  EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Chlorinated Polyethylene (or Chlorosulfonated Polyethylene), Nitrile Rubber, Polyurethane, Viton.

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.
When used as a fuel, this material can produce carbon monoxide in the exhaust. Determine if airborne concentrations are below the occupational exposure limit for carbon monoxide. If not, wear an approved positive-pressure air-supplying respirator.
Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>Agency</th>
<th>TWA (weight)</th>
<th>STEL (weight)</th>
<th>Ceiling (weight)</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>ACGIH</td>
<td>.5 ppm</td>
<td>2.5 ppm</td>
<td>--</td>
<td>Skin A1</td>
</tr>
<tr>
<td>Benzene</td>
<td>CVX</td>
<td>1 ppm</td>
<td>5 ppm</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Benzene</td>
<td>OSHA SRS</td>
<td>1 ppm</td>
<td>5 ppm</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Benzene</td>
<td>OSHA Z-2</td>
<td>10 ppm</td>
<td>--</td>
<td>25 ppm</td>
<td>--</td>
</tr>
<tr>
<td>Butane</td>
<td>ACGIH</td>
<td>1000 ppm</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>ACGIH</td>
<td>100 ppm</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>OSHA Z-1</td>
<td>1050 mg/m3</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Ethanol</td>
<td>ACGIH</td>
<td>1000 ppm</td>
<td>--</td>
<td>--</td>
<td>A4 A3</td>
</tr>
<tr>
<td>Ethanol</td>
<td>OSHA Z-1</td>
<td>1900 mg/m3</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>ACGIH</td>
<td>20 ppm</td>
<td>125 ppm</td>
<td>--</td>
<td>A3</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>OSHA Z-1</td>
<td>435 mg/m3</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Gasoline</td>
<td>ACGIH</td>
<td>300 ppm</td>
<td>500 ppm</td>
<td>--</td>
<td>A3</td>
</tr>
</tbody>
</table>
| Compound | Source     | Health Limit (weight) | Health Limit (weight) | Exposure Effect | Note  
|----------|------------|-----------------------|-----------------------|----------------|-------
| Heptane  | ACGIH      | 400 ppm               | 500 ppm               | --             | --    
| Heptane  | OSHA Z-1   | 2000 mg/m3            | --                    | --             | --    
| Hexane   | ACGIH      | 50 ppm                | --                    | --             | Skin  
| Hexane   | OSHA Z-1   | 1800 mg/m3            | --                    | --             | --    
| Methyl tert-butyl ether (MTBE) | ACGIH | 50 ppm (weight) | -- | -- | A3  
| Methyl tert-butyl ether (MTBE) | CVX | -- | 50 ppm | -- | --  
| Methylcyclohexane | ACGIH | 400 ppm (weight) | -- | -- | --  
| Methylcyclohexane | OSHA Z-1 | 2000 mg/m3 | -- | -- | --  
| Naphthalene | ACGIH | 10 ppm (weight) | 15 ppm (weight) | -- | Skin  
| Naphthalene | OSHA Z-1 | 50 mg/m3 | -- | -- | --  
| Pentane, 2,2,4-trimethyl-(Isooctane) | ACGIH | 300 ppm (weight) | -- | -- | --  
| Pentane, 2,2,4-trimethyl-(Isooctane) | OSHA Z-1 | 2350 mg/m3 | -- | -- | --  
| Toluene (methylbenzene) | ACGIH | 50 ppm (weight) | -- | -- | Skin A4  
| Toluene (methylbenzene) | OSHA Z-2 | 200 ppm (weight) | -- | 300 ppm (weight) | --  
| Xylene (contains o-, m-, & p- xylene isomers in varying amounts) | ACGIH | 100 ppm (weight) | 150 ppm (weight) | -- | A4  
| Xylene (contains o-, m-, & p- xylene isomers in varying amounts) | OSHA Z-1 | 435 mg/m3 | -- | -- | --  

Refer to the OSHA Benzene Standard (29 CFR 1910.1028) and Table Z-2 for detailed training, exposure monitoring, respiratory protection and medical surveillance requirements before using this product. Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Attention: the data below are typical values and do not constitute a specification.

- **Color:** Colorless to yellow
- **Physical State:** Liquid
- **Odor:** Petroleum odor
- **Odor Threshold:** No data available
- **pH:** Not Applicable
- **Vapor Pressure:** 5 psi - 15 psi (Typical) @ 37.8 °C (100 °F)
- **Vapor Density (Air = 1):** 3 - 4 (Typical)
- **Initial Boiling Point:** 37.8°C (100°F) - 204.4°C (400°F) (Typical)
- **Solubility:** Insoluble in water; miscible with most organic solvents.
- **Freezing Point:** Not Applicable
- **Melting Point:** Not Applicable
- **Specific Gravity:** 0.7 g/ml - 0.8 g/ml @ 15.6°C (60.1°F) (Typical)
- **Viscosity:** <1 SUS @ 37.8°C (100°F)
- **Evaporation Rate:** No data available
- **Decomposition temperature:** No Data Available
- **Octanol/Water Partition Coefficient:** 2 - 7

**FLAMMABLE PROPERTIES:**
Flammability (solid, gas): No Data Available
Flashpoint: (Tagliabue Closed Cup ASTM D56) < -45 °C (< -49 °F)
Autoignition: > 280 °C (> 536 °F)
Flammability (Explosive) Limits (% by volume in air): Lower: 1.4 Upper: 7.6

SECTION 10 STABILITY AND REACTIVITY

Reactivity: This material is not expected to react.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Hazardous Decomposition Products: None known (None expected)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for similar materials.
Skin Corrosion/Irritation: For a 4-hour exposure, the Primary Irritation Index (PII) in rabbits is: 4.8/8.0.
Skin Sensitization: This material did not cause skin sensitization reactions in a Buehler guinea pig test.
Acute Dermal Toxicity: LD50: >3.75g/kg (rabbit).
Acute Oral Toxicity: LD50: >5 ml/kg (rat)
Acute Inhalation Toxicity: 4 hour(s) LD50: >20000mg/m3 (rat).
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.
Carcinogenicity: Refer to ADDITIONAL TOXICOLOGY INFORMATION below. Contains naphthalene, which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC). Gasoline has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Contains benzene, which has been classified as a carcinogen by the National Toxicology Program (NTP) and a Group 1 carcinogen (carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
Contains ethylbenzene which has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).
Whole gasoline exhaust has been classified as a Group 2B carcinogen (possibly carcinogenic to humans) by the International Agency for Research on Cancer (IARC).

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.
Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.
Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.
ADDITIONAL TOXICOLOGY INFORMATION:
Gasolines are highly volatile and can produce significant concentrations of vapor at ambient temperatures. Gasoline vapor is heavier than air and at high concentrations may accumulate in confined spaces to present both safety and health hazards. When vapor exposures are low, or short duration and infrequent, such as during refueling and tanker loading/unloading, neither total hydrocarbon nor components such as benzene are likely to result in any adverse health effects. In situations such as accidents or spills where exposure to gasoline vapor is potentially high, attention should be paid to potential toxic effects of specific components. Information about specific components in gasoline can be found in Sections 2/3, 8 and 15 of this MSDS. More detailed information on the health hazard of specific gasoline components can be obtained calling the Chevron Emergency Information Center (see Section 1 for phone numbers). Pathological misuse of solvents and gasoline, involving repeated and prolonged exposure to high concentrations of vapor is a significant exposure on which there are many reports in the medical literature. As with other solvents, persistent abuse involving repeated and prolonged exposures to high concentrations of vapor has been reported to result in central nervous system damage and eventually, death. In a study in which ten human volunteers were exposed for 30 minutes to approximately 200, 500 or 1000 ppm concentrations of gasoline vapor, irritation of the eyes was the only significant effect observed, based on both subjective and objective assessments.

Lifetime inhalation of wholly vaporized unleaded gasoline at 2056 ppm has caused increased liver tumors in female mice and kidney cancer in male rats. In their 1988 review of carcinogenic risk from gasoline, the International Agency for Research on Cancer (IARC) noted that, because published epidemiology studies did not include any exposure data, only occupations where gasoline exposure may have occurred were reviewed. These included gasoline service station attendants and automobile mechanics. IARC also noted that there was no opportunity to separate effects of combustion products from those of gasoline itself. Although IARC allocated gasoline a final overall classification of Group 2B, i.e., possibly carcinogenic to humans, this was based on limited evidence in experimental animals plus supporting evidence including the presence in gasoline of benzene. The actual evidence for carcinogenicity in humans was considered inadequate.

To explore the health effects of workers potentially exposed to gasoline vapors in the marketing and distribution sectors of the petroleum industry, the American Petroleum Institute sponsored a cohort mortality study (Publication 4555), a nested case-control study (Publication 4551), and an exposure assessment study (Publication 4552). Histories of exposure to gasoline were reconstructed for cohort of more than 18,000 employees from four companies for the time period between 1946 and 1985. The results of the cohort mortality study indicated that there was no increased mortality from either kidney cancer or leukemia among marketing and marine distribution employees who were exposed to gasoline in the petroleum industry, when compared to the general population. More importantly, based on internal comparisons, there was no association between mortality from kidney cancer or leukemia and various indices of gasoline exposure. In particular, neither duration of employment, duration of exposure, age at first exposure, year of first exposure, job category, cumulative exposure, frequency of peak exposure, nor average intensity of exposure had any effect on kidney cancer or leukemia mortality. The results of the nested case-control study confirmed the findings of the original cohort study. That is, exposure to gasoline at the levels experienced by this cohort of distribution workers is not a significant risk factor for leukemia (all cell types), acute myeloid leukemia, kidney cancer or multiple myeloma.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is expected to be toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Gasoline studies have been conducted in the laboratory under a variety of test conditions with a range of fish and invertebrate species. An even more extensive database is available on the aquatic toxicity of individual aromatic constituents. The majority of published studies do not identify the type of gasoline evaluated, or even provide distinguishing characteristics such as aromatic content or presence of lead alkyls. As a result, comparison of results among studies using open and closed vessels,
different ages and species of test animals and different gasoline types, is difficult.

The bulk of the available literature on gasoline relates to the environmental impact of monoaromatic (BTEX) and diaromatic (naphthalene, methylnaphthalenes) constituents. In general, non-oxygenated gasoline exhibits some short-term toxicity to freshwater and marine organisms, especially under closed vessel or flow-through exposure conditions in the laboratory. The components which are the most prominent in the water soluble fraction and cause aquatic toxicity, are also highly volatile and can be readily biodegraded by microorganisms.

The ecotoxicity hazard is based on an evaluation of data for the components or a similar material.

96 hour(s) LC50: 2.7 mg/l (Oncorhynchus mykiss)
96 hour(s) LC50: 1.8 mg/l (Mysidopsis bahia)
96 hour(s) LC50: 8.3 mg/l (Cyprinodon variegatus)
48 hour(s) LC50: 3.0 mg/l (Daphnia magna)

**MOBILITY**
No data available.

**PERSISTENCE AND DEGRADABILITY**
This material is expected to be readily biodegradable. Following spillage, the more volatile components of gasoline will be rapidly lost, with concurrent dissolution of these and other constituents into the water. Factors such as local environmental conditions (temperature, wind, mixing or wave action, soil type, etc), photo-oxidation, biodegradation and adsorption onto suspended sediments, can contribute to the weathering of spilled gasoline.

The aqueous solubility of non-oxygenated unleaded gasoline, based on analysis of benzene, toluene, ethylbenzene+xylenes and naphthalene, is reported to be 112 mg/l. Solubility data on individual gasoline constituents also available.

The biodegradability of this material is based on an evaluation of data for the components or a similar material.

**POTENTIAL TO BIOACCUMULATE**
Bioconcentration Factor: No data available.
Octanol/Water Partition Coefficient: 2 - 7

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations. Check governmental regulations and local authorities for approved disposal of this material.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** UN1203, GASOLINE, 3, II; OPTIONAL DISCLOSURE: UN1203, GASOLINE, 3, II, MARINE POLLUTANT (GASOLINE)

**IMO/IMDG Shipping Description:** UN1203, GASOLINE, 3, II, FLASH POINT SEE SECTION 5 OR 9, MARINE POLLUTANT (GASOLINE)
ICAO/IATA Shipping Description: UN1203, GASOLINE, 3, II

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:
1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: YES
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

REGULATORY LISTS SEARCHED:
01-1=IARC Group 1
01-2A=IARC Group 2A
01-2B=IARC Group 2B
02=NTP Carcinogen
03=EPCRA 313
04=CA Proposition 65
05=MA RTK
06=NJ RTK
07=PA RTK

The following components of this material are found on the regulatory lists indicated.
Benzene 01-1, 02, 03, 04, 05, 06, 07
Butane 05, 06, 07
Cyclohexane 03, 05, 06, 07
Ethanol 01-1, 02, 04, 05, 06, 07
Ethyl benzene 01-2B, 03, 04, 05, 06, 07
Gasoline 01-2B, 06, 07
Heptane 05, 06, 07
Hexane 03, 05, 06, 07
Methyl tert-butyl ether (MTBE) 03, 05, 06, 07
Methylcyclohexane 05, 06, 07
Naphthalene 01-2B, 02, 03, 04, 05, 06, 07
Pentane, 2,2,4-trimethyl- (Isooctane) 05, 06, 07
Toluene (methylbenzene) 03, 04, 05, 06, 07
Xylene (contains α-, m-, & p- xylene isomers in varying amounts)

CERCLA REPORTABLE QUANTITIES(RQ)/EPCRA 302 THRESHOLD PLANNING QUANTITIES(TPQ):

<table>
<thead>
<tr>
<th>Component</th>
<th>Component RQ</th>
<th>Component TPQ</th>
<th>Product RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzene</td>
<td>10 lbs</td>
<td>None</td>
<td>186 lbs</td>
</tr>
<tr>
<td>Cyclohexane</td>
<td>1000 lbs</td>
<td>None</td>
<td>34188 lbs</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>1000 lbs</td>
<td>None</td>
<td>34964 lbs</td>
</tr>
<tr>
<td>Hexane</td>
<td>5000 lbs</td>
<td>None</td>
<td>129149 lbs</td>
</tr>
<tr>
<td>Methyl tert-butyl ether (MTBE)</td>
<td>1000 lbs</td>
<td>None</td>
<td>1080351 lbs</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>100 lbs</td>
<td>None</td>
<td>4000 lbs</td>
</tr>
<tr>
<td>Pentane, 2,2,4-trimethyl- (Isooctane)</td>
<td>1000 lbs</td>
<td>None</td>
<td>6270 lbs</td>
</tr>
<tr>
<td>Toluene (methylbenzene)</td>
<td>1000 lbs</td>
<td>None</td>
<td>2627 lbs</td>
</tr>
<tr>
<td>Xylene (contains α-, m-, &amp; p- xylene isomers in varying amounts)</td>
<td>100 lbs</td>
<td>None</td>
<td>649 lbs</td>
</tr>
</tbody>
</table>
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:**
- Health: 1
- Flammability: 3
- Reactivity: 0

**HMIS RATINGS:**
- Health: 2*
- Flammability: 3
- Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**Additional Product Number(s):**

**REVISION STATEMENT:** This revision updates the following sections of this Safety Data Sheet: 1-16

**Revision Date:** JUNE 12, 2014

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLV</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term Exposure Limit</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>API</td>
<td>American Petroleum Institute</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Materials Information System</td>
</tr>
<tr>
<td>DOT</td>
<td>Department of Transportation (USA)</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NCEL</td>
<td>New Chemical Exposure Limit</td>
</tr>
<tr>
<td>SCBA</td>
<td>Self-Contained Breathing Apparatus</td>
</tr>
</tbody>
</table>

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.