



# Safety Data Sheet

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### Premium Unleaded Petrol

Product Use: Fuel

Product Number(s): 390100

#### Company Identification

Chevron New Zealand

604 Great South Road

Auckland 1051

New Zealand

<http://www.caltex.com/nz/en>; <http://www.lubewatch.co.nz>

#### Transportation Emergency Response

New Zealand: 0800-733-835

#### Health Emergency

Poisons Centre: 0800-764-766 (24 hrs)

#### Product Information

email : [nzservice@chevron.com](mailto:nzservice@chevron.com)

Product Information: 0800-733-835

SDS Requests: 0800-733-835

## SECTION 2 HAZARDS IDENTIFICATION

HSNO New Zealand Approval Code: HSR001445

**CLASSIFICATION:** 3.1A - Flammable liquid: Category 1. 6.7A - Carcinogen: Category 1A. 6.4A - Eye irritation: Category 2A. 6.3A - Skin irritation: Category 2. 6.9B - Target organ toxicant (repeated exposure): Category 2. 6.6A - Germ Cell Mutagen: Category 1B. 6.8B - Reproductive toxicant (developmental): Category 2. 6.1E - Acute oral toxicant: Category 5. 9.1D - Acute aquatic toxicant: Category 2. 9.1B - Chronic aquatic toxicant: Category 2.



Revision Number: 5

Revision Date: OCTOBER 07, 2015

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Premium Unleaded Petrol

SDS : 21368

Signal Word: Danger

Physical Hazards: Extremely flammable liquid and vapor (H224).

Health Hazards: May cause cancer (H350). May cause genetic defects (H340). Causes serious eye irritation (H319). Suspected of damaging the unborn child (H361D). Causes skin irritation (H315). May be harmful if swallowed (H303).

Target Organs: May cause damage to organs through prolonged or repeated exposure (H373). May cause damage to organs (Auditory System) through prolonged or repeated exposure (H373).

Environmental Hazards: Toxic to aquatic life with long lasting effects (H411).

**PRECAUTIONARY STATEMENTS:**

**Prevention:** Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Keep away from heat/sparks/open flames/hot surfaces. -- No smoking (P210). Ground/bond container and receiving equipment (P240). Use only non-sparking tools (P242). Take precautionary measures against static discharge (P243). Keep container tightly closed (P233). Use explosion-proof electrical/ventilating/lighting/equipment (P241). Do not breathe dust/fume/gas/mist/vapours/spray (P260). Wear protective gloves/protective clothing/eye protection/face protection (P280). Use personal protective equipment as required (P281). Wash thoroughly after handling (P264). Avoid release to the environment (P273).

**Response:** IF IN EYES: (P305) Rinse cautiously with water for several minutes (P351). Remove contact lenses, if present and easy to do. Continue rinsing (P338). If eye irritation persists: Get medical advice/attention (P337+P313). IF ON SKIN (or hair): (P303) Take off immediately all contaminated clothing (P361). Wash with plenty of soap and water (P352). If skin irritation occurs: Get medical advice/attention (P332+P313). Call a POISON CENTER or doctor/physician if you feel unwell (P312). In case of fire: (P370) Use media specified in the SDS to extinguish (P378). Specific treatment (see Notes to Physician on this label) (P321). Collect spillage (P391).

**Storage:** Store in a well-ventilated place (P403). Keep cool (P235). Store locked up (P405).

**Disposal:** Dispose of contents/container in accordance with applicable local/regional/national/international regulations (P501).

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Gasoline	86290-81-5	100 %volume
TOLUENE	108-88-3	0 - 16 %volume
Ethanol	64-17-5	0 - 10 %volume
Ethylbenzene	100-41-4	1 - 5 %volume
Naphthalene	91-20-3	0.1 - 2 %volume

Benzene	71-43-2	0.1 - 1 %volume
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**SECTION 4 FIRST AID MEASURES**

**Eye:** Flush eyes with water immediately while holding the eyelids open. Remove contact lenses, if worn, after initial flushing, and continue flushing for at least 15 minutes. Get immediate medical attention.  
**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 medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.  
**Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

**SECTION 5 FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.  
**Unusual Fire Hazards:** See Section 7 for proper handling and storage.

**PROTECTION OF FIRE FIGHTERS:**  
**Fire Fighting Instructions:** 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.

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

**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.

**SECTION 7 HANDLING AND STORAGE**

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

**Precautionary Measures:** 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. Never siphon gasoline by mouth.

Do not store in open or unlabeled containers. **READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.** Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.

**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.

**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.

**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.

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### GENERAL CONSIDERATIONS:

Consider the potential hazards of this material (see Section 2), 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 in a well-ventilated area. 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:** Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.

**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:**

Component	Country/ Agency	TWA	STEL	Ceiling	Notation
Gasoline	ACGIH	300 ppm (weight)	500 ppm (weight)	--	A3
TOLUENE	ACGIH	20 ppm (weight)	--	--	--
TOLUENE	New Zealand	188 mg/m3	--	--	Skin
Ethanol	ACGIH	1000 ppm (weight)	--	--	A4 A3
Ethanol	New Zealand	1880 mg/m3	--	--	--
Ethylbenzene	ACGIH	20 ppm (weight)	125 ppm (weight)	--	A3
Ethylbenzene	New Zealand	434 mg/m3	543 mg/m3	--	--
Naphthalene	ACGIH	10 ppm (weight)	15 ppm (weight)	--	Skin
Naphthalene	New Zealand	52 mg/m3	79 mg/m3	--	--
Benzene	ACGIH	.5 ppm (weight)	2.5 ppm (weight)	--	Skin A1 Skin
Benzene	New Zealand	3.19 mg/m3	7.8 mg/m3	--	Skin
Benzene	CVX	1 ppm (weight)	5 ppm (weight)	--	--

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: Yellow

Physical State: Liquid  
Odor: Hydrocarbon odor  
Odor Threshold: No data available  
pH: Not Applicable  
Vapor Pressure: 420 mmHg (Typical) @ 25 °C (77 °F)  
Vapor Density (Air = 1): 3 - 4  
Boiling Point: 30°C (86°F) - 210°C (410°F)  
Solubility: Insoluble in water; miscible with most organic solvents.  
Freezing Point: Not Applicable  
Specific Gravity: 0.70 - 0.80 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)  
Density: 0.75 kg/l @ 15°C (59°F) (Typical)  
Viscosity: <1.40 mm<sup>2</sup>/s @ 40°C (104°F)  
Octanol/Water Partition Coefficient: No data available

#### FLAMMABLE PROPERTIES:

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

### SECTION 11 TOXICOLOGICAL INFORMATION

#### IMMEDIATE HEALTH EFFECTS

**Eye:** Contact with the eyes causes severe irritation. Symptoms may include pain, tearing, reddening, swelling and impaired vision.

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin:** Contact with the skin causes irritation. Skin contact may cause drying or defatting of the skin. Symptoms may include pain, itching, discoloration, swelling, and blistering. Contact with the skin is not expected to cause an allergic skin response.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product

components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials or product components.

**Ingestion:** May be irritating to mouth, throat, and stomach. Symptoms may include pain, nausea, vomiting, and diarrhea.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Inhalation:** Not expected to be harmful if inhaled.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

**Acute Toxicity Estimate:** Not Determined

#### **DELAYED OR OTHER HEALTH EFFECTS:**

**Reproduction and Birth Defects:** This material may cause harm to the unborn child.

**Cancer:** Prolonged or repeated exposure to this material may cause cancer. Gasoline 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).

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 naphthalene, which has been classified as a Group 2B carcinogen (possibly 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).

**Genetic Toxicity:** Contains a material that may cause heritable genetic damage.

**Target Organs:** Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit: Blood/Blood Forming Organs

**Medical Conditions Aggravated by Exposure:** Exposure to naphthalene may aggravate existing blood disorders. Individuals with congenital erythrocyte glucose-6-phosphate dehydrogenase deficiency may be particularly susceptible to the hemolytic effects of naphthalene.

Risk depends on duration and level of exposure.

#### **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 hazards 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.

**MUTAGENICITY:** Gasoline was not mutagenic, with or without activation, in the Ames assay (*Salmonella typhimurium*), *Saccharomyces cerevisiae*, or mouse lymphoma assays. In addition, point mutations were not induced in human lymphocytes. Gasoline was not mutagenic when tested in the mouse dominant lethal assay. Administration of gasoline to rats did not cause chromosomal aberrations in their bone marrow cells.

**EPIDEMIOLOGY:** 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.

This product contains toluene.



**GENERAL TOXICITY:** The primary effects of exposure to toluene in animals and humans are on the central nervous system. Solvent abusers, who typically inhale high concentrations (thousands of ppm) for brief periods of time, in addition to experiencing respiratory tract irritation, often suffer permanent central nervous system effects that include tremors, staggered gait, impaired speech, hearing and vision loss, and changes in brain tissue. Death in some solvent abusers has been attributed to cardiac arrhythmias, which appear to be have been triggered by epinephrine acting on solvent sensitized cardiac tissue. Although liver and kidney effects have been seen in some solvent abusers, results of animal testing with toluene do not support these as primary target organs.

**HEARING:** Humans who were occupationally exposed to concentrations of toluene as low as 100 ppm for long periods of time have experienced hearing deficits. Hearing loss, as demonstrated using behavioral and electrophysiological testing as well as by observation of structural damage to cochlear hair cells, occurred in experimental animals exposed to toluene. It also appears that toluene exposure and noise may interact to produce hearing deficits.

**COLOR VISION:** In a single study of workers exposed to toluene at levels under 50 ppm, small decreases in the ability to discriminate colors in the blue-yellow range have been reported for female workers. This effect, which should be investigated further, is very subtle and would not likely have been noticed by the people tested.

**REPRODUCTIVE/DEVELOPMENTAL TOXICITY:** Toluene may also cause mental and/or growth retardation in the children of female solvent abusers who directly inhale toluene (usually at thousands of ppm) when they are pregnant. Toluene caused growth retardation in rats and rabbits when administered at doses that were toxic to the mothers. In rats, concentrations of up to 5000 ppm did not cause birth defects. No effects were observed in the offspring at doses that did not intoxicate the pregnant animals. The exposure level at which no effects were seen (No Observed Effect Level, NOEL) is 750 ppm in the rat and 500 ppm in the rabbit.

This product contains ethanol (ethyl alcohol).

Chronic ingestion of ethanol can damage the liver, nervous system and heart. Chronic heavy consumption of alcoholic beverages has been associated with an increased risk of cancer. Ingestion of ethanol during pregnancy can cause human birth defects such as fetal alcohol syndrome. This product contains benzene.

**GENETIC TOXICITY/CANCER:** Repeated or prolonged breathing of benzene vapor has been associated with the development of chromosomal damage in experimental animals and various blood diseases in humans ranging from aplastic anemia to leukemia (a form of cancer). All of these diseases can be fatal. In some individuals, benzene exposure can sensitize cardiac tissue to epinephrine which may precipitate fatal ventricular fibrillation.

**REPRODUCTIVE/DEVELOPMENTAL TOXICITY:** No birth defects have been shown to occur in pregnant laboratory animals exposed to doses not toxic to the mother. However, some evidence of fetal toxicity such as delayed physical development has been seen at such levels. The available information on the effects of benzene on human pregnancies is inadequate but it has been established that benzene can cross the human placenta.

**OCCUPATIONAL:** The OSHA Benzene Standard (29 CFR 1910.1028) contains detailed requirements for training, exposure monitoring, respiratory protection and medical surveillance triggered by the exposure level. Refer to the OSHA Standard before using this product.

This product contains naphthalene.

**GENERAL TOXICITY:** Exposure to naphthalene has been reported to cause methemoglobinemia and/or

hemolytic anemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts.

**REPRODUCTIVE TOXICITY AND BIRTH DEFECTS:** Naphthalene did not cause birth defects when administered orally to rabbits, rats, and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta. **GENETIC TOXICITY:** Naphthalene caused chromosome aberrations and sister chromatid exchanges in Chinese hamster ovary cells, but was not a mutagen in several other in-vitro tests. **CARCINOGENICITY:** In a study conducted by the National Toxicology Program (NTP), mice exposed to 10 or 30 ppm of naphthalene by inhalation daily for two years had chronic inflammation of the nose and lungs and increased incidences of metaplasia in those tissues. The incidence of benign lung tumors (alveolar/bronchiolar adenomas) was significantly increased in the high-dose female group but not in the male groups. In another two-year inhalation study conducted by NTP, exposure of rats to 10, 30, and 60 ppm naphthalene caused increases in the incidences of a variety of nonneoplastic lesions in the nose. Increases in nasal tumors were seen in both sexes, including olfactory neuroblastomas in females at 60 ppm and adenomas of the respiratory epithelium in males at all exposure levels. The relevance of these effects to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41 mg/kg/day.

This product contains ethylbenzene.

**BIRTH DEFECTS AND REPRODUCTION:** Ethylbenzene is not expected to cause birth defects or other developmental effects based on well-conducted studies in rabbits and rats sponsored by NIOSH. Other studies in rats and mice which reported urinary tract malformations have many deficiencies and have limited usefulness in evaluating human risk. Reproductive effects are not expected based on a NIOSH study of fertility, and lack of effects observed for sperm counts and motility, estrous cycle and pathology of reproductive organs following repeated exposures. **HEARING:** Statistically significant losses in outer hair cells (OHCs) were observed in rats exposed to  $\geq 200$  ppm ethylbenzene, 6 hours/day, 6 days/week for 13 weeks, after an 8-week recovery period. Following longer exposure, inner hair cells losses were also observed in rats exposed to  $\geq 600$  ppm ethylbenzene, but only occasionally in rats exposed to 400 ppm. The Lowest Observed Adverse Effect Level in rats (LOAEL) was 200 ppm for losses of OHCs. Guinea pigs exposed to ethylbenzene at 2,500 ppm, 6 hours/day for 5 days did not show auditory deficits or losses in OHCs. The concentration of ethylbenzene used in the JP-8 study was approximately 10 ppm. **GENETIC TOXICITY:** Ethylbenzene tested negative in the bacterial mutation test, Chinese Hamster Ovary (CHO) cell in vitro assay, sister chromatid exchange assay and an unscheduled DNA synthesis assay. Conflicting results have been reported for the mouse lymphoma cell assay. Increased micronuclei were reported in an in vitro Syrian hamster embryo cell assay; however, two in vivo micronuclei studies in mice were negative. In Syrian hamster embryo cells in vitro, cell transformation was observed at 7 days of incubation but not at 24 hours. Based on these results, ethylbenzene is not expected to be mutagenic or clastogenic. **CARCINOGENICITY:** In studies conducted by the National Toxicology Program, rats and mice were exposed to ethylbenzene at 25, 250 and 750 ppm for six hours per day, five days per week for 103 weeks. In rats exposed to 750 ppm, the incidence of kidney tubule hyperplasia and tumors was increased. Testicular tumors develop spontaneously in nearly all rats if allowed to complete their natural life span; in this study, the development of these tumors appeared to be enhanced in male rats exposed to 750 ppm. In mice, the incidences of lung tumors in males and liver tumors in females exposed to 750 ppm were increased as compared to control mice but were within the range of incidences observed historically in control mice. Other liver effects were observed in male mice exposed to 250 and 750 ppm. The incidences

of hyperplasia were increased in the pituitary gland in female mice at 250 and 750 ppm and in the thyroid in male and female mice at 750 ppm.

## 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.

The product has not been tested. The statement has been derived from products of a similar structure and composition.

### 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 product has not been tested. The statement has been derived from products of a similar structure and composition.

### POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

## 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.

## 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.

Land Transport New Zealand Shipping Description: SEE IMO/IMDG SHIPPING DESCRIPTION OR REFERENCE BILL OF LADING

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

## SECTION 15 REGULATORY INFORMATION

### REGULATORY LISTS SEARCHED:

01-1=IARC Group 1  
01-2A=IARC Group 2A  
01-2B=IARC Group 2B

The following components of this material are found on the regulatory lists indicated.

Ethanol	01-1
Naphthalene	01-2B
Gasoline	01-2B
Ethylbenzene	01-2B
Benzene	01-1

This product may contain tri-tertiarybutyl phenol (CASRN 732-26-3), which is currently banned in Japan, at concentrations above the limit of detection.

### CHEMICAL INVENTORIES:

DSL (Canada), EINECS (European Union), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: AICS (Australia), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines).

## SECTION 16 OTHER INFORMATION

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

Revision Date: OCTOBER 07, 2015

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

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit

	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CVX - Chevron	NFPA - National Fire Protection Association (USA)
	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the Hazardous Substances and New Organisms Act 1996 and Approved Code of Practice: Preparation of Safety Data Sheets (HSNO CoP 8-1 09-06) by the Chevron Energy Technology Company, 100 Chevron Way, Richmond, California 94802.

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.