



SAFETY DATA SHEET

SDS ID NO.: 0130MAR019
Revision Date 03/19/2018

1. IDENTIFICATION

Product Name: Marathon Petroleum Gasoline with Ethanol - All Grades

Synonym: Gasoline; Gasoline with Ethanol; Regular Unleaded Gasoline With Ethanol; Regular Unleaded Gasoline With Alcohol; Mid Grade Unleaded Gasoline With Ethanol; Mid Grade Unleaded Gasoline with Alcohol; Premium Unleaded Gasoline With Ethanol; Premium Unleaded Gasoline With Alcohol; 0128MAR019; 0129MAR019

Product Code: 0130MAR019

Chemical Family: Complex Hydrocarbon Substance

Recommended Use: Fuel.

Restrictions on Use: All others.

Manufacturer, Importer, or Responsible Party Name and Address:
MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information (M-F, 8-5 PM EST): 1-419-421-3070

Emergency Telephone (24/7): CHEMTREC: 1-800-424-9300 CCN#: 13740

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|--|-------------|
| Flammable liquids | Category 1 |
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2A |
| Germ cell mutagenicity | Category 1B |
| Carcinogenicity | Category 1A |
| Reproductive toxicity | Category 2 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Specific target organ toxicity (repeated exposure) | Category 1 |
| Aspiration toxicity | Category 1 |
| Acute aquatic toxicity | Category 2 |
| Chronic aquatic toxicity | Category 2 |

Hazards Not Otherwise Classified (HNOC)

Static accumulating flammable liquid

Label elements

EMERGENCY OVERVIEW

Danger

EXTREMELY FLAMMABLE LIQUID AND VAPOR

May accumulate electrostatic charge and ignite or explode

May be fatal if swallowed and enters airways

Causes skin irritation

Causes serious eye irritation

May cause respiratory irritation

May cause drowsiness or dizziness

May cause genetic defects

May cause cancer

Suspected of damaging fertility or the unborn child

Causes damage to organs (blood, blood-forming organs, immune system) through prolonged or repeated exposure

Toxic to aquatic life with long lasting effects



Appearance Clear yellow liquid

Physical State Liquid

Odor Hydrocarbon

Precautionary Statements - 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

Keep container tightly closed

Ground/bond container and receiving equipment

Use explosion-proof electrical/ventilating/lighting/equipment

Use only non-sparking tools.

Take precautionary measures against static discharge

Do not eat, drink or smoke when using this product

Do not breathe mist/vapors/spray

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Wash hands and any possibly exposed skin thoroughly after handling

Avoid release to the environment

Precautionary Statements - Response

IF exposed, concerned or you feel unwell: Get medical attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

If eye irritation persists: Get medical attention

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower

If skin irritation occurs: Get medical attention

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF SWALLOWED: Immediately call a POISON CENTER or doctor

Do NOT induce vomiting

In case of fire: Use water spray, fog or regular foam for extinction

Collect spillage

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Keep cool

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container at an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Gasoline is a complex combination of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons having molecular chains ranging in length from four to ten carbons. May contain small amounts of dye and other additives (>0.02%) which are not considered hazardous at the concentrations used.

Composition Information:

| Name | CAS Number | % Concentration |
|--------------------------------------|------------|-----------------|
| Gasoline | 86290-81-5 | 100 |
| Heptane (mixed isomers) | 142-82-5 | 2.5-26 |
| Butane (mixed isomers) | 106-97-8 | 0.5-19 |
| Pentane (mixed isomers) | 78-78-4 | 6.5-19 |
| Hexane Isomers (other than n-Hexane) | 107-83-5 | 2-12 |
| Ethyl Alcohol | 64-17-5 | 5.7-10.6 |
| Toluene | 108-88-3 | 3-9.5 |
| Xylene (mixed isomers) | 1330-20-7 | 3.5-9.5 |
| Benzene | 71-43-2 | 0.1-4.9 |
| n-Hexane | 110-54-3 | 0.1-4.5 |
| Cumene | 98-82-8 | 0-4 |
| 1,2,4 Trimethylbenzene | 95-63-6 | 1-4 |
| Ethylbenzene | 100-41-4 | 0.5-2.5 |
| Cyclohexane | 110-82-7 | 0-1.5 |
| Octane | 111-65-9 | 0-1.5 |
| 1,2,3-Trimethylbenzene | 526-73-8 | 0-1 |
| Naphthalene | 91-20-3 | 0.1-0.5 |

Benzene concentration is percent by volume. All other concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES**First Aid Measures**

- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).
- Inhalation:** Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. If symptoms occur get medical attention.
- Skin Contact:** Immediately wash exposed skin with plenty of soap and water while removing contaminated clothing and shoes. May be absorbed through the skin in harmful amounts. Get medical attention if irritation persists. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).
- Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Destroy contaminated, non-chemical resistant footwear.
- Eye Contact:** Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.
- Ingestion:** Do not induce vomiting because of danger of aspirating liquid into lungs, causing serious

damage and chemical pneumonitis. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Irritating to eyes, respiratory system and skin. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Prolonged or repeated exposure may cause adverse effects on blood, blood-forming organs, and immune system. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Indication of any immediate medical attention and special treatment needed

Notes To Physician:

INHALATION: This material (or a component) sensitizes the myocardium to the effects of sympathomimetic amines. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in individuals exposed to this material. Administration of sympathomimetic drugs should be avoided.

SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be **SERIOUS SURGICAL EMERGENCIES**.

INGESTION: This material represents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

For small fires, Class B fire extinguishing media such as CO₂, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media

Do not use straight water streams to avoid spreading fire.

Specific hazards arising from the chemical

This product has been determined to be an extremely flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. May accumulate electrostatic charge and ignite or explode. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge, or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire related information, see NFPA 30 or the Emergency Response Guidebook 128.

Hazardous combustion products

Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data

Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge Yes.

Special protective equipment and precautions for firefighters

Firefighters should wear full protective clothing and positive-pressure self-contained breathing apparatus (SCBA) with a full face-piece, as appropriate. Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires, but

can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep run-off water out of sewers and water sources.

Additional firefighting tactics

FIRES INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after the fire is out. Do not direct water at source of leak or safety devices; icing may occur. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

EVACUATION: Consider initial downwind evacuation for at least 1000 feet. If tank, rail car or tank truck is involved in a fire, ISOLATE for 5280 feet (1 mile) in all directions; also, consider initial evacuation of 5280 feet (1 mile) in all directions.

NFPA Health 1 Flammability 3 Instability 0 Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions:** Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources.
- Protective equipment:** Use personal protection measures as recommended in Section 8.
- Emergency procedures:** Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.
- Environmental precautions:** Avoid release to the environment. Avoid subsoil penetration. Ethanol in gasoline phase separates in contact with water. Monitor downstream for dissolved ethanol or other appropriate indicators.
- Methods and materials for containment:** Contain liquid with sand or soil. Prevent spilled material from entering storm drains, sewers, and open waterways.
- Methods and materials for cleaning up:** Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers. When recovering free liquids ensure all equipment is grounded and bonded. Use only non-sparking tools.

7. HANDLING AND STORAGE

Safe Handling Precautions: NEVER SIPHON THIS PRODUCT BY MOUTH. Use appropriate grounding and bonding practices. Static accumulating flammable liquid. Bonding and grounding may be insufficient to eliminate the hazard from static electricity. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Vapors may travel along the ground or be moved by ventilation. Flashback may occur along vapor trails. No smoking. Use only non-sparking tools. Avoid contact with skin, eyes and clothing. Avoid breathing fumes, gas, or vapors. Use only with adequate ventilation. Avoid repeated and prolonged skin contact. Use personal protection measures as recommended in Section 8. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering, pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition of vapors or mists without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation.

Portable containers should never be filled while in or on a motor vehicle or marine craft. Containers should be placed on the ground. Static electric discharge can ignite fuel vapors when filling non-grounded containers or vehicles on trailers. The nozzle spout must be kept in contact with the container before and during the entire filling operation. Use only approved containers.

A buildup of static electricity can occur upon re-entry into a vehicle during fueling especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (i.e., clothing and upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while refueling.

Cellular phones and other electronic devices may have the potential to emit electrical charges (sparks). Sparks in potentially explosive atmospheres (including fueling areas such as gas stations) could cause an explosion if sufficient flammable vapors are present. Therefore, turn off cellular phones and other electronic devices when working in potentially explosive atmospheres or keep devices inside your vehicle during refueling.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

Storage Conditions:

Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Do not store near an open flame, heat or other sources of ignition.

Incompatible Materials

Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Name | ACGIH TLV | OSHA PELS: | OSHA - Vacated PELs | NIOSH IDLH |
|--|------------------------------|--|---|------------|
| Gasoline 86290-81-5 | 300 ppm TWA 500 ppm STEL | - | 300 ppm TWA 900 mg/m ³ TWA 500 ppm STEL 1500 mg/m ³ STEL | - |
| Heptane (mixed isomers) 142-82-5 | 400 ppm TWA 500 ppm STEL | TWA: 500 ppm TWA: 2000 mg/m ³ | 400 ppm TWA 1600 mg/m ³ TWA 500 ppm STEL 2000 mg/m ³ STEL | 750 ppm |
| Butane (mixed isomers) 106-97-8 | 1000 ppm STEL | - | 800 ppm TWA 1900 mg/m ³ TWA | - |
| Pentane (mixed isomers) 78-78-4 | 1000 ppm TWA | - | - | - |
| Hexane Isomers (other than n-Hexane) 107-83-5 | 500 ppm TWA 1000 ppm STEL | - | 500 ppm TWA 1800 mg/m ³ TWA 1000 ppm STEL 3600 mg/m ³ STEL | - |
| Ethyl Alcohol 64-17-5 | 1000 ppm STEL | TWA: 1000 ppm TWA: 1900 mg/m ³ | 1000 ppm TWA 1900 mg/m ³ TWA | 3300 ppm |
| Toluene 108-88-3 | 20 ppm TWA | TWA: 200 ppm Ceiling: 300 ppm | 100 ppm TWA 375 mg/m ³ TWA 150 ppm STEL 560 mg/m ³ STEL | 500 ppm |
| Xylene (mixed isomers) 1330-20-7 | 100 ppm TWA 150 ppm STEL | TWA: 100 ppm TWA: 435 mg/m ³ | 100 ppm TWA 435 mg/m ³ TWA 150 ppm STEL 655 mg/m ³ STEL | 900 ppm |
| Benzene | 0.5 ppm TWA | TWA: 10 ppm (applies to | 25 ppm Ceiling | 500 ppm |

| | | | | |
|------------------------------------|--|--|--|----------|
| 71-43-2 | 2.5 ppm STEL Skin - potential significant contribution to overall exposure by the cutaneous route | industry segments exempt from the benzene standard) TWA: 1 ppm STEL: 5 ppm (see 29 CFR 1910.1028) | 1 ppm TWA 5 ppm STEL | |
| n-Hexane 110-54-3 | 50 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route | TWA: 500 ppm TWA: 1800 mg/m ³ | 50 ppm TWA 180 mg/m ³ TWA | 1100 ppm |
| Cumene 98-82-8 | 50 ppm TWA | TWA: 50 ppm TWA: 245 mg/m ³ Skin | 50 ppm TWA 245 mg/m ³ TWA Limit applies to skin | 900 ppm |
| 1,2,4 Trimethylbenzene 95-63-6 | 25 ppm TWA | - | 25 ppm TWA 125 mg/m ³ TWA | - |
| Ethylbenzene 100-41-4 | 20 ppm TWA | TWA: 100 ppm TWA: 435 mg/m ³ | 100 ppm TWA 435 mg/m ³ TWA 125 ppm STEL 545 mg/m ³ STEL | 800 ppm |
| Cyclohexane 110-82-7 | 100 ppm TWA | TWA: 300 ppm TWA: 1050 mg/m ³ | 300 ppm TWA 1050 mg/m ³ TWA | 1300 ppm |
| Octane 111-65-9 | 300 ppm TWA | TWA: 500 ppm TWA: 2350 mg/m ³ | 300 ppm TWA 1450 mg/m ³ TWA 375 ppm STEL 1800 mg/m ³ STEL | 1000 ppm |
| 1,2,3-Trimethylbenzene 526-73-8 | 25 ppm TWA | - | 25 ppm TWA 125 mg/m ³ TWA | - |
| Naphthalene 91-20-3 | 10 ppm TWA Skin - potential significant contribution to overall exposure by the cutaneous route | TWA: 10 ppm TWA: 50 mg/m ³ | 10 ppm TWA 50 mg/m ³ TWA 15 ppm STEL 75 mg/m ³ STEL | 250 ppm |

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required in an enclosed area or when there is inadequate ventilation. Use mechanical ventilation equipment that is explosion-proof.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Use nitrile rubber, Viton® or PVA gloves for repeated or prolonged skin exposure. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times.

Respiratory protection: Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid
Appearance Clear yellow liquid

| | |
|--|----------------------------------|
| Color | Yellow |
| Odor | Hydrocarbon |
| Odor Threshold | No data available. |
| <u>Property</u> | <u>Values (Method)</u> |
| Melting Point / Freezing Point | No data available. |
| Initial Boiling Point / Boiling Range | 24-210 °C / 75-410 °F (ASTM D86) |
| Flash Point | -43 °C / -45 °F |
| Evaporation Rate | No data available. |
| Flammability (solid, gas) | Not applicable. |
| Flammability Limit in Air (%): | |
| Upper Flammability Limit: | 7.6 |
| Lower Flammability Limit: | 1.4 |
| Explosion limits: | No data available. |
| Vapor Pressure | 6.5-15 psi (ASTM D4814) |
| Vapor Density | 3-4 |
| Specific Gravity / Relative Density | 0.70-0.76 |
| Water Solubility | No data available. |
| Solubility in other solvents | No data available. |
| Partition Coefficient | No data available. |
| Decomposition temperature | No data available. |
| pH: | Not applicable |
| Autoignition Temperature | 280 °C / 536 °F |
| Kinematic Viscosity | No data available. |
| Dynamic Viscosity | No data available. |
| Explosive Properties | No data available. |
| VOC Content (%) | 100% |
| Density | No data available. |
| Bulk Density | Not applicable. |

10. STABILITY AND REACTIVITY

| | |
|--|--|
| <u>Reactivity</u> | The product is non-reactive under normal conditions. |
| <u>Chemical stability</u> | The material is stable at 70°F (21°C), 760 mmHg pressure. |
| <u>Possibility of hazardous reactions</u> | None under normal processing. |
| <u>Hazardous polymerization</u> | Will not occur. |
| <u>Conditions to avoid</u> | Excessive heat, sources of ignition, open flame. |
| <u>Incompatible Materials</u> | Strong oxidizing agents. |
| <u>Hazardous decomposition products</u> | None known under normal conditions of use. |

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

| | |
|---------------------|--|
| Inhalation | May cause irritation of respiratory tract. May cause drowsiness or dizziness. Breathing high concentrations of this material in a confined space or by intentional abuse can cause irregular heartbeats which can cause death. |
| Eye contact | Eye irritation may result from contact with the liquid or exposure to vapor. |
| Skin contact | Causes skin irritation. Effects may become more serious with repeated or prolonged contact. May be absorbed through the skin in harmful amounts. |
| Ingestion | May be fatal if swallowed or vomited and enters airways. May cause irritation of the mouth, |

throat and gastrointestinal tract.

Acute toxicological data

| Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|--------------------|-----------------------|------------------------------------|
| Gasoline 86290-81-5 | 14000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 5.2 mg/L (Rat) 4 h |
| Heptane (mixed isomers) 142-82-5 | - | 3000 mg/kg (Rabbit) | 103 g/m ³ (Rat) 4 h |
| Butane (mixed isomers) 106-97-8 | - | - | 658 mg/L (Rat) 4 h |
| Pentane (mixed isomers) 78-78-4 | - | - | 450 mg/L (Mouse) 2 h |
| Hexane Isomers (other than n-Hexane) 107-83-5 | > 5000 mg/kg (Rat) | - | - |
| Ethyl Alcohol 64-17-5 | > 5000 mg/kg (Rat) | - | 124.7 mg/L (Rat) 4 h |
| Toluene 108-88-3 | > 2000 mg/kg (Rat) | 8390 mg/kg (Rabbit) | 12.5 mg/L (Rat) 4 h |
| Xylene (mixed isomers) 1330-20-7 | > 2000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 5.04 mg/L (Rat) 4 h |
| Benzene 71-43-2 | > 2000 mg/kg (Rat) | > 5000 mg/kg (Rabbit) | > 20 mg/l (Rat) 4 h |
| n-Hexane 110-54-3 | 15000 mg/kg (Rat) | 3000 mg/kg (Rabbit) | 48000 ppm (Rat) 4 h |
| Cumene 98-82-8 | > 2000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 20 mg/L (Rat) 6 h |
| 1,2,4 Trimethylbenzene 95-63-6 | 3280 mg/kg (Rat) | > 3160 mg/kg (Rabbit) | 18,000 mg/m ³ (Rat) 4 h |
| Ethylbenzene 100-41-4 | > 2000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | 17.2 mg/L (Rat) 4 h |
| Cyclohexane 110-82-7 | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | 13.9 mg/L (Rat) 4 h |
| Octane 111-65-9 | - | - | 118 g/m ³ (Rat) 4 h |
| 1,2,3-Trimethylbenzene 526-73-8 | - | - | - |
| Naphthalene 91-20-3 | 490 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 340 mg/m ³ (Rat) 1 h |

Delayed and immediate effects as well as chronic effects from short and long-term exposure

NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30-year latency period. Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffer's Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

C9 AROMATIC HYDROCARBONS: A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats.

Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

BUTANES: Studies in laboratory animals indicate exposure to extremely high levels of butanes (1-10 or higher vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

ETHANOL: Repeated ingestion of ethanol can result in alcohol abuse, causing behavioral changes, memory loss, impaired judgement, decreased appetite, irregular heartbeats, and decreased fertility. Prolonged and repeated ingestion of ethanol has also been associated with cancers of the mouth, pharynx, esophagus and liver. Ethanol ingestion by pregnant women can cause miscarriage, low birth weight, premature birth and fetal alcohol syndrome. In males, acute and chronic alcohol ingestion may affect gonadal hormone levels. It may also affect the liver, kidney, brain, blood and cardiovascular system.

TOLUENE: Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal studies following very high levels of exposure. The relevance of these findings to humans is not clear at this time.

XYLENES, ALL ISOMERS: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, nervous system damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure with evidence of maternal toxicity. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

BENZENE: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer and other diseases of the blood forming organs including Acute

Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a case control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clear evidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma.

N-HEXANE: Long-term or repeated exposure to n-hexane can cause peripheral nerve damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

CUMENE: Overexposure to cumene may cause upper respiratory tract irritation and CNS depression. Studies in laboratory animals indicate evidence of respiratory tract hyperplasia, and adverse effects on the liver, kidney and adrenal glands following high level exposure. The relevance of these findings to humans is not clear at this time. Findings from lifetime laboratory rodent inhalation studies were as follows: In F344/N rats: an increased incidence of renal carcinomas and adenomas, respiratory epithelial adenomas, and interstitial cell adenomas of the testes. In B6C3F1 mice: an increased incidence of carcinomas and adenomas of the bronchi and lung, liver neoplasms, hemangiosarcomas of the spleen, and adenomas of the thyroid.

1,2,4-TRIMETHYLBENZENE: The following information pertains to a mixture of C9 aromatic hydrocarbons, over 40% of which was composed of 1,2,4-trimethylbenzene. A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm. Embryotoxicity has been reported in studies of laboratory animals. Adverse effects included increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate.<n><n>

ETHYLBENZENE: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice

(alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure with evidence of maternal toxicity. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss) following exposure levels as low as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

CARBON MONOXIDE: is a chemical asphyxiant with no warning properties (such as odor). At 400-500 ppm for 1 hour headache and dyspnea may occur. If activity is increased, symptoms of overexposure may include nausea, irritability, increased respiration, tinnitus, sweating, chest pain, confusion, impaired judgement, dizziness, weakness, drowsiness, ataxia, irregular heart beat, cyanosis and pallor. Levels in excess of 1000 ppm can result in collapse, loss of consciousness, respiratory failure and death. Extremely high concentrations (12,800 ppm) can cause immediate unconsciousness and death in 1-3 minutes. Repeated anoxia can lead to central nervous system damage and peripheral neuropathy, with loss of sensation in the fingers, amnesia, and mental deterioration and possible congestive heart failure. Damage may also occur to the fetus, lung, liver, kidney, spleen, cardiovascular system and other organs.

WHOLLY-VAPORIZED UNLEADED GASOLINE: Lifetime exposure to wholly vaporized unleaded gasoline produced an increased incidence of liver tumors in female mice exposed to the highest exposure concentration (2056 ppm) and α -2 urinary globulin-mediated kidney tumors in male rats. No exposure-related tumors were observed in male mice or female rats. The male-specific rat kidney tumors are not considered relevant to human health. Mice receiving lifetime repeated skin application of various petroleum naphthas exhibited an irritation-dependent increased incidence of skin tumors. Additional studies suggest that these tumors occur through a mechanism that may not be relevant to human health. Epidemiological data from over 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer resulting from gasoline exposure. Unleaded gasoline has been identified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

COMBUSTION ENGINE EXHAUST: Chronic inhalation studies of gasoline engine exhaust in mice, rats and hamsters did not produce any carcinogenic effects. Condensates/extracts of gasoline engine exhaust produced an increase in tumors compared to controls when testing by skin painting, subcutaneous injection, intratracheal instillation or implantation into the lungs. Gasoline exhaust has been classified as possibly carcinogenic to humans (2B) by the International Agency for Research on Cancer (IARC).

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and Symptoms Irritating to eyes, respiratory system and skin. Symptoms may include redness, itching, and inflammation. May cause nausea, vomiting, diarrhea, and signs of nervous system depression: headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue. Aspiration hazard. May cause coughing, chest pains, shortness of breath, pulmonary edema and/or chemical pneumonitis. Prolonged or repeated exposure may cause damage to organs. Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects May cause genetic defects.

Carcinogenicity May cause cancer.

Cancer designations are listed in the table below

| Name | ACGIH (Class) | IARC (Class) | NTP | OSHA |
|--|----------------------------------|--|---|------------------|
| Gasoline 86290-81-5 | Confirmed animal carcinogen (A3) | Possible human carcinogen (2B) | Not Listed | Not Listed |
| Heptane (mixed isomers) 142-82-5 | Not Listed | Not Listed | Not Listed | Not Listed |
| Butane (mixed isomers) 106-97-8 | Not Listed | Not Listed | Not Listed | Not Listed |
| Pentane (mixed isomers) 78-78-4 | Not Listed | Not Listed | Not Listed | Not Listed |
| Hexane Isomers (other than n-Hexane) 107-83-5 | Not Listed | Not Listed | Not Listed | Not Listed |
| Ethyl Alcohol 64-17-5 | Confirmed animal carcinogen (A3) | Alcoholic Beverages Carcinogenic to humans (1) | Alcoholic Beverage Consumption Known to be human carcinogen | Not Listed |
| Toluene 108-88-3 | Not Classifiable (A4) | Not Classifiable (3) | Not Listed | Not Listed |
| Xylene (mixed isomers) 1330-20-7 | Not classifiable (A4) | Not classifiable (3) | Not Listed | Not Listed |
| Benzene 71-43-2 | Confirmed human carcinogen (A1) | Carcinogenic to humans (1) | Known to be human carcinogen | Known carcinogen |
| n-Hexane 110-54-3 | Not Listed | Not Listed | Not Listed | Not Listed |
| Cumene 98-82-8 | Not listed | Possible human carcinogen (2B) | Reasonably anticipated to be a human carcinogen | Not listed |
| 1,2,4 Trimethylbenzene 95-63-6 | Not Listed | Not Listed | Not Listed | Not Listed |
| Ethylbenzene 100-41-4 | Confirmed animal carcinogen (A3) | Possible human carcinogen (2B) | Not Listed | Not Listed |
| Cyclohexane 110-82-7 | Not Listed | Not Listed | Not Listed | Not Listed |
| Octane 111-65-9 | Not Listed | Not Listed | Not Listed | Not Listed |
| 1,2,3-Trimethylbenzene 526-73-8 | Not Listed | Not Listed | Not Listed | Not Listed |
| Naphthalene 91-20-3 | Confirmed animal carcinogen (A3) | Possible human carcinogen (2B) | Reasonably anticipated to be a human carcinogen | Not Listed |

Reproductive toxicity Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (STOT) - single exposure Respiratory system. Central nervous system.

Specific Target Organ Toxicity (STOT) - repeated exposure Blood. Blood-forming organs. Immune system.

Aspiration hazard May be fatal if swallowed or vomited and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

This product should be considered toxic to aquatic organisms, with the potential to cause long lasting adverse effects in the aquatic environment.

| Name | Algae/aquatic plants | Fish | Toxicity to Microorganisms | Crustacea |
|---|------------------------------------|---|----------------------------|--|
| Gasoline 86290-81-5 | 72-hr EC50 = 56 mg/l Algae | 96-hr LC50 = 11 mg/l Rainbow trout (static) | - | 48-hr LC50 = 7.6 mg/l Daphnia magna |
| Heptane (mixed isomers) 142-82-5 | - | 96-hr LC50 = 375 mg/L Tilapia | - | - |
| Butane (mixed isomers) 106-97-8 | - | - | - | - |
| Pentane (mixed isomers) 78-78-4 | - | 96-hr LC50 = 3.1 mg/L Rainbow trout | - | 48-hr EC50 = >1 - <10 mg/L Daphnia magna |
| Hexane Isomers (other than n-Hexane) 107-83-5 | - | - | - | - |
| Ethyl Alcohol 64-17-5 | - | 96-hr LC50 >1,000 mg/l Rainbow Trout (static) 96-hr LC50 >100 mg/l Fathead minnow (static) | - | 48-hr LC50 >1,000 mg/l Daphnia magna |
| Toluene 108-88-3 | 72-hr EC50 = 12.5 mg/l Algae | 96-hr LC50 <= 10 mg/l Rainbow trout | - | 48-hr EC50 = 5.46-9.83 mg/l Daphnia magna 48-hr EC50 = 11.5 mg/l Daphnia magna (Static) |
| Xylene (mixed isomers) 1330-20-7 | 72-hr EC50 = 11 mg/l Algae | 96-hr LC50 = 8 mg/l Rainbow trout | - | 48-hr LC50 = 3.82 mg/l Daphnia magna |
| Benzene 71-43-2 | 72-hr EC50 = 29 mg/l Algae | 96-hr LC50 = 5.3 mg/l Rainbow trout (flow-through) | - | 48-hr EC50 = 8.76-15.6 mg/l Daphnia magna (Static) |
| n-Hexane 110-54-3 | - | 96-hr LC50 = 2.5 mg/l Fathead minnow | - | - |
| Cumene 98-82-8 | 72-hr EC50 = 2.6 mg/l Algae | 96-hr LC50 = 6.04-6.61 mg/l Fathead minnow (Flow-through) 96-hr LC50 = 2.7 mg/l Rainbow trout (semi-static) | - | 48-hr EC50 = 7.9-14.1 mg/l Daphnia magna (static) |
| 1,2,4 Trimethylbenzene 95-63-6 | - | 96-hr LC50 = 7.19-8.28 mg/l Fathead minnow (flow-through) | - | 48-hr EC50 = 6.14 mg/L Daphnia magna |
| Ethylbenzene 100-41-4 | 72-hr EC50 = 1.7-7.6 mg/l Algae | 96-hr LC50 = 4 mg/L Rainbow trout | - | 48-hr EC50 = 1-4 mg/L Daphnia magna |
| Cyclohexane 110-82-7 | 72-hr EC50 = 500 mg/l Algae | 96-hr LC50 = 3.96-5.18 mg/l Fathead minnow | - | 48-hr EC50 = 1.7-3.5 mg/L Bay shrimp |
| Octane 111-65-9 | - | - | - | 48-hr LC50 = 0.38 mg/l Daphnia magna |
| 1,2,3-Trimethylbenzene 526-73-8 | - | 96-hr LC50 = 7.72 mg/l Fathead Minnow (flow-through) | - | - |
| Naphthalene 91-20-3 | - | 96-hr LC50 = 0.91-2.82 mg/l Rainbow trout (static) 96-hr LC50 = 1.99 mg/l Fathead minnow (static) | - | 48-hr LC50 = 1.6 mg/l Daphnia magna |

Persistence and degradability

Expected to be inherently biodegradable. The presence of ethanol in this product may impede the biodegradation of benzene, toluene, ethylbenzene and xylene in groundwater, resulting in elongated plumes of these constituents.

Bioaccumulation

Has the potential to bioaccumulate.

Mobility in soil

May partition into air, soil and water.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues

This material may be a flammable liquid waste.

Safe Handling of Wastes

Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required. Use appropriate grounding and bonding practices. Use only non-sparking tools. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. No smoking.

Disposal of Wastes / Methods of Disposal

The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal

Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

| | |
|---------------------------------|----------|
| UN Proper Shipping Name: | Gasoline |
| UN/Identification No: | UN 1203 |
| Class: | 3 |
| Packing Group: | II |

TDG (Canada):

| | |
|------------------------------------|----------|
| UN Proper Shipping Name: | Gasoline |
| UN/Identification No: | UN 1203 |
| Transport Hazard Class(es): | 3 |
| Packing Group: | II |

15. REGULATORY INFORMATION

US Federal Regulatory Information:

| | |
|--|---|
| US TSCA Chemical Inventory Section 8(b): | This product and/or its components are listed on the TSCA Chemical Inventory. |
|--|---|

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product does not contain any component(s) included on EPA's Extremely Hazardous Substance (EHS) List.

| Name | CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs |
|--------------------------------------|---|
| Gasoline | NA |
| Heptane (mixed isomers) | NA |
| Butane (mixed isomers) | NA |
| Pentane (mixed isomers) | NA |
| Hexane Isomers (other than n-Hexane) | NA |
| Ethyl Alcohol | NA |
| Toluene | NA |
| Xylene (mixed isomers) | NA |
| Benzene | NA |
| n-Hexane | NA |
| Cumene | NA |

| | |
|------------------------|----|
| 1,2,4 Trimethylbenzene | NA |
| Ethylbenzene | NA |
| Cyclohexane | NA |
| Octane | NA |
| 1,2,3-Trimethylbenzene | NA |
| Naphthalene | NA |

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

| Name | Hazardous Substances RQs |
|--------------------------------------|-------------------------------------|
| Gasoline | NA |
| Heptane (mixed isomers) | NA |
| Butane (mixed isomers) | NA |
| Pentane (mixed isomers) | NA |
| Hexane Isomers (other than n-Hexane) | NA |
| Ethyl Alcohol | NA |
| Toluene | 1000 lb final RQ 454 kg final RQ |
| Xylene (mixed isomers) | 100 |
| Benzene | 10 |
| n-Hexane | 5000 |
| Cumene | 5000 |
| 1,2,4 Trimethylbenzene | NA |
| Ethylbenzene | 1000 |
| Cyclohexane | 1000 |
| Octane | NA |
| 1,2,3-Trimethylbenzene | NA |
| Naphthalene | 100 lb final RQ 45.4 kg final RQ |

SARA Section 311/312: The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Chronic Health Hazard
- Fire Hazard

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

| Name | CERCLA/SARA 313 Emission reporting: |
|--------------------------------------|-------------------------------------|
| Gasoline | None |
| Heptane (mixed isomers) | None |
| Butane (mixed isomers) | None |
| Pentane (mixed isomers) | None |
| Hexane Isomers (other than n-Hexane) | None |
| Ethyl Alcohol | None |
| Toluene | 1.0 % de minimis concentration |
| Xylene (mixed isomers) | 1.0 % de minimis concentration |
| Benzene | 0.1 % de minimis concentration |
| n-Hexane | 1.0 % de minimis concentration |
| Cumene | 1.0 % de minimis concentration |
| 1,2,4 Trimethylbenzene | 1.0 % de minimis concentration |
| Ethylbenzene | 0.1 % de minimis concentration |
| Cyclohexane | 1.0 % de minimis concentration |
| Octane | None |
| 1,2,3-Trimethylbenzene | None |
| Naphthalene | 0.1 % de minimis concentration |

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Gasoline

| | |
|---|---|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 0957 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Not Listed |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Carcinogen; Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | SN 0957 TPQ: 10000 lb (Under N.J.A.C. 7:1G, environmental hazardous substances in mixtures such as gasoline or new and used petroleum oil may be reported under these categories) |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | Not Listed |

Heptane (mixed isomers)

| | |
|---|--------------------------|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1339 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | Not Listed |
| Illinois - Toxic Air Contaminants: | Not Listed |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | Not Listed |

Butane (mixed isomers)

| | |
|---|---------------------------|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 0273 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - fourth degree |
| New Jersey - Environmental Hazardous Substances List: | SN 0273 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Not Listed |
| New York - Reporting of Releases Part 597 - | Not Listed |

| | |
|---|--|
| List of Hazardous Substances: | |
| Pentane (mixed isomers) | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1064 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Not Listed |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - fourth degree |
| New Jersey - Environmental Hazardous Substances List: | SN 1064 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Not Listed |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | Not Listed |
| Hexane Isomers (other than n-Hexane) | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1285 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Not Listed |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | Not Listed |
| Illinois - Toxic Air Contaminants: | Not Listed |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | Not Listed |
| Ethyl Alcohol | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Carcinogen, initial date 4/29/11 (in alcoholic beverages) Carcinogen, initial date 7/1/88 (when associated with alcohol abuse) Developmental toxicity, initial date 10/1/87 (in alcoholic beverages) |
| New Jersey Right-To-Know: | SN 0844 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Teratogen |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Carcinogen; Flammable - third degree; Mutagen; Teratogen |
| New Jersey - Environmental Hazardous Substances List: | Not Listed |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - | Not Listed |

| | |
|---|---|
| List of Hazardous Substances: | |
| Toluene | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Developmental toxicity, initial date 1/1/91 Female reproductive toxicity, initial date 8/7/09 SN 1866 |
| New Jersey Right-To-Know: | Environmental hazard |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Not Listed |
| Florida Substance List: | Toxic (skin); Flammable (skin) |
| Rhode Island Right-To-Know: | 100 lb Annual usage threshold |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree; Teratogen |
| New Jersey - Environmental Hazardous Substances List: | SN 1866 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 1000 lb RQ (air); 1 lb RQ (land/water) |
| Xylene (mixed isomers) | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 2014 |
| Pennsylvania Right-To-Know: | Environmental hazard |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic (skin); Flammable (skin) |
| Michigan Critical Materials Register List: | 100 lb Annual usage threshold all isomers |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | SN 2014 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 1000 lb RQ (air); 1 lb RQ (land/water) |
| Benzene | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Carcinogen, initial date 2/27/87 Developmental toxicity, initial date 12/26/97 Male reproductive toxicity, initial date 12/26/97 SN 0197 |
| New Jersey Right-To-Know: | Environmental hazard; Special hazardous substance |
| Pennsylvania Right-To-Know: | Carcinogen; Extraordinarily hazardous |
| Massachusetts Right-To Know: | Not Listed |
| Florida Substance List: | Toxic (skin); Flammable (skin); Carcinogen (skin) |
| Rhode Island Right-To-Know: | 100 lb Annual usage threshold |
| Michigan Critical Materials Register List: | Carcinogen; Extraordinarily hazardous |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Present |
| New Jersey - Special Hazardous Substances: | Carcinogen; Flammable - third degree; Mutagen |
| New Jersey - Environmental Hazardous Substances List: | SN 0197 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 10 lb RQ (air); 1 lb RQ (land/water) |

n-Hexane

| | |
|---|-------------------------------------|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1340 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | SN 1340 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 1 lb RQ (air); 1 lb RQ (land/water) |

Cumene

| | |
|---|--|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Carcinogen, initial date 4/6/10 |
| New Jersey Right-To-Know: | SN 0542 |
| Pennsylvania Right-To-Know: | Environmental hazard |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic (skin); Flammable (skin) |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | SN 0542 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 5000 lb RQ (air); 1 lb RQ (land/water) |

1,2,4 Trimethylbenzene

| | |
|---|------------|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1929 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Not Listed |
| New Jersey - Environmental Hazardous Substances List: | Not Listed |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | Not Listed |

Ethylbenzene

| | |
|----------------------------|----------------------------------|
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Carcinogen, initial date 6/11/04 |
| New Jersey Right-To-Know: | SN 0851 |

| | |
|---|--|
| Pennsylvania Right-To-Know: | Environmental hazard |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Carcinogen; flammable - Third degree |
| New Jersey - Environmental Hazardous Substances List: | SN 0851 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Present |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 1000 lb RQ (air); 1 lb RQ (land/water) |
| Cyclohexane | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 0565 |
| Pennsylvania Right-To-Know: | Environmental hazard |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | SN 0565 TPQ: 500 lb |
| Illinois - Toxic Air Contaminants: | Not Listed |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | 1000 lb RQ (air); 1 lb RQ (land/water) |
| Octane | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1434 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic; Flammable |
| Michigan Critical Materials Register List: | Not Listed |
| Massachusetts Extraordinarily Hazardous Substances: | Not Listed |
| California - Regulated Carcinogens: | Not Listed |
| Pennsylvania RTK - Special Hazardous Substances: | Not Listed |
| New Jersey - Special Hazardous Substances: | Flammable - third degree |
| New Jersey - Environmental Hazardous Substances List: | Not Listed |
| Illinois - Toxic Air Contaminants: | Not Listed |
| New York - Reporting of Releases Part 597 - List of Hazardous Substances: | Not Listed |
| 1,2,3-Trimethylbenzene | |
| Louisiana Right-To-Know: | Not Listed |
| California Proposition 65: | Not Listed |
| New Jersey Right-To-Know: | SN 1929 |
| Pennsylvania Right-To-Know: | Present |
| Massachusetts Right-To Know: | Present |
| Florida Substance List: | Not Listed |
| Rhode Island Right-To-Know: | Toxic |

Michigan Critical Materials Register List: Not Listed
 Massachusetts Extraordinarily Hazardous Substances: Not Listed
 California - Regulated Carcinogens: Not Listed
 Pennsylvania RTK - Special Hazardous Substances: Not Listed
 New Jersey - Special Hazardous Substances: Not Listed
 New Jersey - Environmental Hazardous Substances List: Not Listed
 Illinois - Toxic Air Contaminants: Present
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed

Naphthalene

Louisiana Right-To-Know: Not Listed
 California Proposition 65: Carcinogen, initial date 4/19/02
 New Jersey Right-To-Know: SN 1322 SN 3758
 Pennsylvania Right-To-Know: Environmental hazard Present (particulate)
 Massachusetts Right-To Know: Present
 Florida Substance List: Not Listed
 Rhode Island Right-To-Know: Toxic; Flammable
 Michigan Critical Materials Register List: Not Listed
 Massachusetts Extraordinarily Hazardous Substances: Not Listed
 California - Regulated Carcinogens: Not Listed
 Pennsylvania RTK - Special Hazardous Substances: Not Listed
 New Jersey - Special Hazardous Substances: Carcinogen
 New Jersey - Environmental Hazardous Substances List: SN 1322 TPQ: 500 lb (Reportable at the de minimis quantity of >0.1%)
 Illinois - Toxic Air Contaminants: Present
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: 100 lb RQ (air); 1 lb RQ (land/water)

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

| Name | Canada - WHMIS: Classifications of Substances: | Canada - WHMIS: Ingredient Disclosure: |
|--------------------------------------|--|--|
| Gasoline | B2,D2A,D2B | 0.1% |
| Heptane (mixed isomers) | B2,D2B | 1% |
| Butane (mixed isomers) | A,B1 | 1% |
| Pentane (mixed isomers) | B2 | 1% |
| Hexane Isomers (other than n-Hexane) | B2 | 1% |
| Ethyl Alcohol | B2,D2B | 0.1% |
| Toluene | B2,D2A,D2B | 0.1% |
| Xylene (mixed isomers) | B2,D2A,D2B | m-, o-isomers 1.0%; p-isomer 0.1% |
| Benzene | B2,D2A,D2B | 0.1% |
| n-Hexane | B2,D2A,D2B | 1% |
| Cumene | B2,D2A | 0.1% |
| 1,2,4 Trimethylbenzene | B3,D2B | 1% |
| Ethylbenzene | B2,D2A,D2B | 0.1% |
| Cyclohexane | B2,D2B | 1% |
| Octane | B2,D2B | 1% |
| 1,2,3-Trimethylbenzene | B3 | 1% |
| Naphthalene | B4,D2A | 0.1% |



Note: Not applicable.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Revision Notes

Revision Date 03/19/2018
Previous Publish Date 11/06/2017
Revised Sections The following sections (§) have been updated:
2. HAZARD IDENTIFICATION
3. COMPOSITION/INFORMATION ON INGREDIENTS
4. FIRST AID MEASURES
11. TOXICOLOGICAL INFORMATION

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.