



Safety Data Sheet

Section 1: Identification

Product identifier

Product Name

- **Gasoline, Conventional BOB**

Synonyms

- CBOB; Gasoline, Low Sulfur Unleaded (All Grades); Gasoline, Unleaded, Conventional (All Grades)

SDS Number/Grade

- 251720

Relevant identified uses of the substance or mixture and uses advised against

Recommended use

- Fuel

Details of the supplier of the safety data sheet

Manufacturer

- [Redacted]

Telephone (General)

- [Redacted]

Emergency telephone number

Manufacturer

- [Redacted]

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

- Flammable Liquids 1
- Aspiration 1
- Skin Irritation 2
- Eye Irritation 2
- Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
- Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
- Germ Cell Mutagenicity 1B
- Carcinogenicity 1A
- Reproductive Toxicity 2
- Specific Target Organ Toxicity Repeated Exposure 1
- Specific Target Organ Toxicity Repeated Exposure 2

Label elements

OSHA HCS 2012



DANGER



- Hazard statements** • Extremely flammable liquid and vapour
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 through prolonged or repeated exposure.
May cause damage to organs through prolonged or repeated exposure.

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 and/or hot surfaces. - No smoking.
Keep container tightly closed.
Ground and/or 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 breathe mists, vapours, and/or spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
- Response** • In case of fire: Use appropriate media for extinction.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.
If on skin: Wash with plenty of water .
Take off contaminated clothing and wash before reuse.
Specific treatment, see supplemental first aid information.
If skin irritation occurs: Get medical advice/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 advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
- Storage/Disposal** • Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.
Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition					
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments
Gasoline	NDA	100%	NDA	OSHA HCS 2012: Flam. Liq. 1; Skin Irrit. 2; Asp. Tox. 1; STOT SE 3: Narc. & Resp. Irrit.; Eye Irrit. 2; Muta. 1B (Orl, Inhl); Carc. 1A (Inhl); Repr. 2 (Inhl); STOT RE 1 (CNS, Inhl), (Blood, Bone marrow, Inhl); STOT RE 2 (Ear, Inhl)	NDA
Xylene [0% TO 21%]	CAS:1330-20-7	0% TO 21%	Ingestion/Oral-Rat LD50 • 4300 mg/kg Inhalation-Rat LC50 • 5000 ppm 4 Hour(s) Skin-Rabbit LD50 • >1700 mg/kg	OSHA HCS 2012: Flam. Liq. 3; Acute Tox. 4 (Inhl); Skin Irrit. 2; Eye Irrit. 2; Repr. 1B (Inhl); STOT SE 3: Narc.; STOT SE 3: Resp. Irrit.	NDA
Toluene [0% TO 15%]	CAS:108-88-3	0% TO 15%	Ingestion/Oral-Rat LD50 • 636 mg/kg Inhalation-Rat LC50 • 49 g/m ³ 4 Hour(s) Skin-Rabbit LD50 • 14100 µL/kg	OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (orl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B; Repr. 2; STOT SE 3: Narc.; STOT RE 1 (CNS, Inhl); Asp. Tox. 1	NDA
Ethylbenzene [0% TO 5%]	CAS:100-41-4	0% TO 5%	Ingestion/Oral-Rat LD50 • 3500 mg/kg Inhalation-Rat LC50 • 55000 mg/m ³ 2 Hour(s) Skin-Rabbit LD50 • >5000 mg/kg	OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (inhl); Eye Irrit. 2; Carc. 2 (Inhl); Repr. 2 (Inhl); STOT SE 3: Narc.; STOT SE 3: Resp. Irrit. (Inhl); STOT RE 2 (Ear, Inhl); Asp. Tox. 1	NDA
Benzene [0% TO 5%]	CAS:71-43-2	0% TO 5%	Ingestion/Oral-Rat LD50 • 930 mg/kg Inhalation-Rat LC50 • 10000 ppm 7 Hour(s) Skin-Rabbit LD50 • >9400 µL/kg	OSHA HCS 2012: Flam. Liq. 2; Acute Tox. 4 (orl); Acute Tox. 4 (inhl); Skin Irrit. 2; Eye Irrit. 2; Muta. 1B (Orl, Inhl); Carc. 1A (Inhl); Repr. 2 (Inhl); STOT SE 3: Narc. (Inhl); STOT RE 1 (Blood, Bone marrow, Inhl); Asp. Tox. 1	NDA
1,2,4-Trimethylbenzene [0% TO 5%]	CAS:95-63-6	0% TO 5%	Ingestion/Oral-Rat LD50 • 5 g/kg Inhalation-Rat LC50 • 18000 mg/m ³ 4 Hour (s)	OSHA HCS 2012: Flam. Liq. 3; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3: Narc; STOT SE 3: Resp. Irrit. (inhl); Asp. Tox. 1	NDA
Hexane [0% TO 4%]	CAS:110-54-3	0% TO 4%	Ingestion/Oral-Rat LD50 • 25 g/kg Inhalation-Rat LC50 • 627000 mg/m ³ 3 Minute(s)	OSHA HCS 2012: Flam. Liq. 2; Repr. 2; STOT RE 2 (CNS & Nervous System); Skin Irrit. 2; Eye Irrit. 2B; STOT SE 3: Narc. & Resp. Irrit.; Asp. Tox. 1	NDA
Cyclohexane [0% TO 2%]	CAS:110-82-7	0% TO 2%	Ingestion/Oral-Rat LD50 • 6240 mg/kg Skin-Rabbit LD50 • >2000 mg/kg	OSHA HCS 2012: Flam. Liq. 2; Skin Irrit. 2; Eye Irrit. 2; STOT SE 3: Resp. Irrit. & Narc.; Asp. Tox. 1	NDA

Section 4: First-Aid Measures

Description of first aid measures

- Inhalation**
- Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical attention.
- Skin**
- In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Remove and isolate contaminated clothing. Wash skin with soap and water. If skin irritation occurs: Get medical advice/attention.
- Eye**
- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. If eye irritation persists: Get medical advice/attention.
- Ingestion**
- Do NOT induce vomiting. Obtain medical attention immediately if ingested.

Most important symptoms and effects, both acute and delayed

- Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

- Notes to Physician**
- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 5: Fire-Fighting Measures

Extinguishing media

- Suitable Extinguishing Media**
- Use CO₂, dry chemical, or foam. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Water spray is recommended to cool or protect exposed materials or structures.
- Unsuitable Extinguishing Media**
- Do not use direct water streams.

Special hazards arising from the substance or mixture

- Unusual Fire and Explosion Hazards**
- HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Containers may explode when heated. Many liquids are lighter than water. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapors may travel to source of ignition and flash back. Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.
- Hazardous Combustion Products**
- Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of nitrogen and sulfur may also be formed.

Advice for firefighters

- Structural firefighters' protective clothing will only provide limited protection. Wear positive pressure self-contained breathing apparatus (SCBA). Move containers from fire area if you can do it without risk. LARGE FIRES: Cool containers with flooding quantities of water until well after fire is out.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

- Personal Precautions**
- Ventilate the area before entry. CAUTION: Victim may be a source of contamination. Do not walk through spilled material. Wear appropriate personal protective equipment,

avoid direct contact. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Emergency Procedures

- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. LARGE SPILL: Consider initial downwind evacuation for at least 300 meters (1000 feet) ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Stay upwind. Keep out of low areas.

Environmental precautions

- Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Stop leak if you can do it without risk. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material. A vapor suppressing foam may be used to reduce vapors. All equipment used when handling the product must be grounded. LARGE SPILLS: Dike far ahead of liquid spill for later disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Use only in well ventilated areas. Avoid contact with heat and ignition sources. Take precautionary measures against static charges. Use only non-sparking tools. All equipment used when handling the product must be grounded. Do not siphon by mouth, this can result in lung aspiration which can be harmful or fatal. Open container slowly to relieve any pressure. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames. Wear appropriate personal protective equipment, avoid direct contact. Do not breathe mist, vapours and/or spray. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. "Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner.

Conditions for safe storage, including any incompatibilities

Storage

- Keep container tightly closed. Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources. Protect container(s) against physical damage. Keep from direct sunlight. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines				
	Result	ACGIH	NIOSH	OSHA
Toluene (108-88-3)	Ceilings	Not established	Not established	300 ppm Ceiling
	TWAs	20 ppm TWA	100 ppm TWA; 375 mg/m ³ TWA	200 ppm TWA

	STELs	Not established	150 ppm STEL; 560 mg/m ³ STEL	Not established
Benzene (71-43-2)	Ceilings	Not established	Not established	25 ppm Ceiling
	STELs	2.5 ppm STEL	1 ppm STEL	5 ppm STEL (see 29 CFR 1910.1028)
	TWAs	0.5 ppm TWA	0.1 ppm TWA	10 ppm TWA (applies to industry segments exempt from the benzene standard at 29 CFR 1910.1028); 1 ppm TWA
Cyclohexane (110-82-7)	TWAs	100 ppm TWA	300 ppm TWA; 1050 mg/m ³ TWA	300 ppm TWA; 1050 mg/m ³ TWA
Ethylbenzene (100-41-4)	TWAs	20 ppm TWA	100 ppm TWA; 435 mg/m ³ TWA	100 ppm TWA; 435 mg/m ³ TWA
	STELs	Not established	125 ppm STEL; 545 mg/m ³ STEL	Not established
Xylene (1330-20-7)	TWAs	100 ppm TWA	Not established	100 ppm TWA; 435 mg/m ³ TWA
	STELs	150 ppm STEL	Not established	Not established
Hexane (110-54-3)	TWAs	50 ppm TWA	50 ppm TWA; 180 mg/m ³ TWA	500 ppm TWA; 1800 mg/m ³ TWA
1,2,4-Trimethylbenzene (95-63-6)	TWAs	Not established	25 ppm TWA; 125 mg/m ³ TWA	Not established

Exposure controls

Engineering Measures/Controls

- Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Use explosion-proof electrical/ventilating/lighting/equipment.

Personal Protective Equipment

Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Follow the OSHA respirator regulations found in 29 CFR 1910.134. Use a NIOSH/MSHA approved respirator if exposure limits are exceeded or symptoms are experienced.

Eye/Face

- Wear chemical splash safety goggles. Depending on conditions of use, a face shield may be necessary.

Skin/Body

- Wear appropriate gloves. Depending on conditions of use, apron and/or arm covers may be necessary.

Environmental Exposure Controls

- Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways. Follow best practice for site management and disposal of waste.

Key to abbreviations

ACGIH = American Conference of Governmental Industrial Hygiene

NIOSH = National Institute of Occupational Safety and Health

OSHA = Occupational Safety and Health Administration

STEL = Short Term Exposure Limits are based on 15-minute exposures

TWA = Time-Weighted Averages are based on 8h/day, 40h/week exposures

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Clear to amber liquid with gasoline odor.
Color	Clear to amber.	Odor	Gasoline
Odor Threshold	No data available		
General Properties			

Boiling Point	80 to 440 F(26.6667 to 226.6667 C)	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	No data available
Specific Gravity/Relative Density	0.72 to 0.75 Water=1	Bulk Density	6.17 lbs/gal
Water Solubility	Negligible	Viscosity	No data available
Volatility			
Vapor Pressure	330 to 775 mmHg (torr) @ 100 F (37.7778 C) 6.4-15 psia (Reid VP)	Vapor Density	> 1 Air=1
Evaporation Rate	> 1 n-Butyl Acetate = 1	Volatiles (Wt.)	100 %
Volatiles (Vol.)	100 %		
Flammability			
Flash Point	< -49 F(< -45 C)	UEL	7.6 %
LEL	1.4 %	Autoignition	833 F(445 C)
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- No dangerous reaction known under conditions of normal use.

Chemical stability

- Stable under normal temperatures and pressures.

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Avoid contact with heat and ignition sources.

Incompatible materials

- Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products

- Not anticipated under normal conditions of use.

Section 11 - Toxicological Information

Information on toxicological effects

Components	
Toluene (0% TO 15%)	108-88-3
<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 636 mg/kg; Inhalation-Rat LC50 • 49 g/m³ 4 Hour(s); Inhalation-Human TClO • 1500 mg/m³ 8 Hour(s); <i>Sense Organs and Special Senses:Eye: Lacrimation; Sense Organs and Special Senses:Eye: Conjunctive irritation; Behavioral: Ataxia; Inhalation-Human TClO • 200 ppm; Brain and Coverings: Recordings from specific areas of CNS; Behavioral: Antipsychotic; Blood: Changes in bone marrow not included above; Inhalation-Man TClO • 50 ppm; Kidney, Ureter, and Bladder: Other changes in urine composition; Skin-Rabbit LD50 • 14100 µL/kg;</i></p> <p>Irritation: Eye-Rabbit • 2 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation;</p> <p>Multi-dose Toxicity: Inhalation-Mouse TClO • 250 ppm 4 Day(s)-Continuous; Behavioral: Convulsions or effect on seizure threshold; Behavioral: Abuse; Inhalation-Mouse TClO • 50 ppm 12 Week(s)-Intermittent; Brain and Coverings: Other degenerative changes; Inhalation-Rat TClO • 10 ppm 6 Hour(s) 13 Week(s)-Intermittent; Brain and Coverings: Other degenerative changes; Biochemical: <i>Enzyme inhibition, induction, or change in blood or</i></p>	

		<p><i>tissue levels:Multiple enzyme effects;</i></p> <p>Mutagen: Micronucleus test • Ingestion/Oral-Mouse • 200 mg/kg; Sister chromatid exchange • Inhalation-Human • 252 µg/L 19 Year(s); Cytogenetic analysis • Inhalation-Rat • 5400 µg/m³ 16 Week(s)-Intermittent;</p> <p>Reproductive: Inhalation-Mouse TLo • 500 mg/m³ 24 Hour(s)(6-13D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus);</i> Inhalation-Mouse TLo • 200 ppm 7 Hour(s) (7-16D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Urogenital system</i></p>
Benzene (0% TO 5%)	71-43-2	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 930 mg/kg; <i>Behavioral:Tremor; Behavioral:Convulsions or effect on seizure threshold;</i> Inhalation-Rat LC50 • 10000 ppm 7 Hour(s); Inhalation-Human TLo • 50 mg/m³ 2 Hour(s); <i>Behavioral:Changes in psychophysiological tests; Behavioral:Muscle weakness;</i> Inhalation-Rat TLo • 1 ppm 6 Hour(s); <i>Kidney, Ureter, and Bladder:Other changes in urine composition;</i> Skin-Rabbit LD50 • >9400 µL/kg;</p> <p>Irritation: Eye-Rabbit • 2 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 20 mg 24 Hour(s) • Moderate irritation;</p> <p>Multi-dose Toxicity: Inhalation-Mouse TLo • 100 ppm 2 Week(s)-Intermittent; <i>Endocrine:Differential effect of sex or castration on observed toxicity; Blood:Leukopenia; Blood:Changes in bone marrow not included above;</i> Inhalation-Mouse TLo • 100 ppm 6 Hour(s) 10 Day(s)-Intermittent; <i>Blood:Changes in bone marrow not included above; Blood:Changes in platelet count;</i></p> <p>Mutagen: Dominant lethal test • Ingestion/Oral-Mouse • 1 mg/kg; Cytogenetic analysis • Inhalation-Human • 0.1 ppm; Cytogenetic analysis • Inhalation-Human • 125 ppm 1 Year(s); Sister chromatid exchange • Inhalation-Mouse • 10 ppm 6 Hour(s); Micronucleus test • Inhalation-Rat • 1 ppm 6 Hour(s);</p> <p>Reproductive: Inhalation-Mouse TLo • 5 ppm (6-15D preg); <i>Reproductive Effects:Effects on Embryo or Fetus:Cytological changes; Reproductive Effects:Specific Developmental Abnormalities:Blood and lymphatic system;</i> Inhalation-Mouse TLo • 20 ppm 6 Hour(s)(6-15D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Blood and lymphatic system;</i> Inhalation-Rat TLo • 670 mg/m³ 24 Hour(s)(15D pre/1-22D preg); <i>Reproductive Effects:Effects on Fertility:Female fertility index;</i> Parenteral-Mouse TLo • 4 g/kg (12D preg); <i>Reproductive Effects:Effects on Newborn:Weaning or lactation index;</i></p> <p>Tumorigen / Carcinogen: Inhalation-Human • 150 ppm 15 Minute(s) 8 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Blood:Leukemia</i></p>
Xylene (0% TO 21%)	1330-20-7	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 4300 mg/kg; <i>Liver:Other changes; Kidney, Ureter, and Bladder:Other changes;</i> Inhalation-Rat LC50 • 5000 ppm 4 Hour(s); Inhalation-Man LLo • 10000 ppm 6 Hour(s); <i>Behavioral:General anesthetic; Lungs, Thorax, or Respiration:Cyanosis; Blood:Other changes;</i> Inhalation-Human TLo • 200 ppm; <i>Sense Organs and Special Senses:Olfaction:Other changes; Sense Organs and Special Senses:Eye:Conjunctive irritation; Lungs, Thorax, or Respiration:Other changes;</i> Skin-Rabbit LD50 • >1700 mg/kg;</p> <p>Irritation: Eye-Rabbit • 5 mg 24 Hour(s) • Severe irritation; Skin-Rabbit • 500 mg 24 Hour(s) • Moderate irritation;</p> <p>Reproductive: Inhalation-Rabbit TLo • 1 g/m³ 24 Hour(s)(7-20D preg); <i>Reproductive Effects:Effects on Fertility:Abortion;</i> Inhalation-Rat TLo • 50 mg/m³ 6 Hour(s)(1-21D preg); <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality; Reproductive Effects:Effects on Embryo or Fetus:Fetotoxicity (except death, e.g., stunted fetus); Reproductive Effects:Specific Developmental Abnormalities:Craniofacial (including nose and tongue)</i></p>
Ethylbenzene (0% TO 5%)	100-41-4	<p>Acute Toxicity: Ingestion/Oral-Rat LD50 • 3500 mg/kg; Inhalation-Guinea Pig LLo • 2500 ppm 8 Hour(s); <i>Behavioral:Coma;</i> Inhalation-Human TLo • 21700 mg/m³; <i>Behavioral:Antipsychotic;</i> Inhalation-Mouse TLo • 600 ppm 6 Minute(s); <i>Lungs, Thorax, or Respiration:Respiratory depression;</i> Skin-Rabbit LD50 • 17800 µL/kg;</p> <p>Irritation: Eye-Rabbit • 500 mg • Severe irritation; Skin-Rabbit • 15 mg 24 Hour(s)-Open • Mild irritation;</p> <p>Multi-dose Toxicity: Inhalation-Rat TLo • 550 ppm 8 Hour(s) 5 Day(s)-Intermittent; <i>Sense Organs and Special Senses:Ear:Change in acuity; Sense Organs and Special Senses:Ear:Changes in cochlear structure or function;</i> Inhalation-Rat TLo • 200 ppm 13 Week(s)-Intermittent; <i>Sense Organs and Special Senses:Ear:Changes in cochlear structure or function;</i></p> <p>Mutagen: Specific locus test • Intraperitoneal-Mouse • 754 µmol/L; Micronucleus test • Unreported Route-Hamster • Embryo (Somatic cell) • 25 mg/L; Sister chromatid exchange • Unreported Route-Human • Lymphocyte (Somatic cell) • 10 mmol/L; Mutation in Mammalian Somatic Cells • Unreported Route-Mouse • Lymphocyte (Somatic cell) • 80 mg/L;</p> <p>Reproductive: Inhalation-Rabbit TLo • 1 g/m³ 24 Hour(s)(7-20D preg); <i>Reproductive Effects:Effects on Fertility:Abortion;</i> Inhalation-Rat TLo • 1000 ppm (6H/6-20D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Other developmental abnormalities; Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Inhalation-Rat TLo • 96 ppm 7 Hour(s)(1-19D preg); <i>Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i> Inhalation-Rat TLo • 600 mg/m³ 24 Hour(s)(7-15D preg); <i>Reproductive Effects:Effects on Fertility:Post-implantation mortality; Reproductive Effects:Effects on Embryo or Fetus:Fetal death; Reproductive Effects:Specific Developmental Abnormalities:Musculoskeletal system;</i></p> <p>Tumorigen / Carcinogen: Inhalation-Mouse TLo • 750 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic:Carcinogenic by RTECS criteria; Lungs, Thorax, or Respiration:Bronchiogenic carcinoma;</i></p>

		<i>Liver: Tumors</i> ; Inhalation-Rat TCLo • 23400 mg/kg 104 Week(s)-Intermittent; <i>Tumorigenic: Equivocal tumorigenic agent by RTECS criteria</i> ; <i>Kidney, Ureter, and Bladder: Kidney tumors</i> ; <i>Reproductive Effects: Tumorigenic Effects: Testicular tumors</i> ; Inhalation-Rat TCLo • 750 ppm 6 Hour(s) 2 Year(s)-Intermittent; <i>Tumorigenic: Carcinogenic by RTECS criteria</i> ; <i>Kidney, Ureter, and Bladder: Tumors</i>
1,2,4-Trimethylbenzene (0% TO 5%)	95-63-6	Acute Toxicity: Ingestion/Oral-Rat LD50 • 5 g/kg; Inhalation-Rat LC50 • 18000 mg/m ³ 4 Hour(s); Multi-dose Toxicity: Inhalation-Rat TCLo • 100 ppm 6 Hour(s) 20 Day(s)-Intermittent; <i>Behavioral: Changes in motor activity (specific assay)</i> ; <i>Behavioral: Analgesia</i> ; <i>Behavioral: Alteration of operant conditioning</i> ; Inhalation-Rat TCLo • 20 mg/m ³ 16 Week(s)-Continuous; <i>Kidney, Ureter, and Bladder: Other changes in urine composition</i>
Hexane (0% TO 4%)	110-54-3	Acute Toxicity: Ingestion/Oral-Rat LD50 • 25 g/kg; Inhalation-Rat LC50 • 48000 ppm 4 Hour(s); Irritation: Eye-Rabbit • 10 mg • Mild irritation; Reproductive: Inhalation-Rat TCLo • 5000 ppm (6-19D preg); <i>Reproductive Effects: Specific Developmental Abnormalities: Musculoskeletal system</i> ; <i>Reproductive Effects: Specific Developmental Abnormalities: Urogenital system</i>
Cyclohexane (0% TO 2%)	110-82-7	Acute Toxicity: Ingestion/Oral-Rabbit LD50 • 5.5 mg/kg; Irritation: Skin-Rabbit • 1548 mg 2 Day(s)-Intermittent; Multi-dose Toxicity: Inhalation-Mouse TCLo • 2000 ppm 90 Day(s)-Intermittent; <i>Behavioral: Somnolence (general depressed activity)</i> ; <i>Behavioral: Changes in motor activity (specific assay)</i>

GHS Properties	Classification
Respiratory sensitization	OSHA HCS 2012 • No data available
Serious eye damage/Irritation	OSHA HCS 2012 • Eye Irritation 2
Acute toxicity	OSHA HCS 2012 • No data available
Aspiration Hazard	OSHA HCS 2012 • Aspiration 1
Carcinogenicity	OSHA HCS 2012 • Carcinogenicity 1A
Skin corrosion/Irritation	OSHA HCS 2012 • Skin Irritation 2
Skin sensitization	OSHA HCS 2012 • No data available
STOT-RE	OSHA HCS 2012 • Specific Target Organ Toxicity Repeated Exposure 1; Specific Target Organ Toxicity Repeated Exposure 2
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects; Specific Target Organ Toxicity Single Exposure 3: Respiratory Tract Irritation
Toxicity for Reproduction	OSHA HCS 2012 • Toxic to Reproduction 2
Germ Cell Mutagenicity	OSHA HCS 2012 • Germ Cell Mutagenicity 1B

Potential Health Effects

Inhalation

Acute (Immediate)

- May cause respiratory irritation. May affect the central nervous system. Symptoms may include dizziness, drowsiness, lethargy, coma and death.

Chronic (Delayed)

- Prolonged or repeated exposures to benzene vapors can cause damage to the blood and blood forming organs, including disorders like leukopenia, thrombocytopenia, and aplastic anemia. In animal models (particularly rats), ethyl benzene affects the auditory function mainly in the cochlear mid-frequency range and ototoxicity was observed after combined exposure to noise and ethyl benzene. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause central nervous system damage, including hearing loss and visual disturbances.

Skin

Acute (Immediate)

- Causes skin irritation.

Chronic (Delayed)

- No data available.

Eye

- Acute (Immediate)** • Causes serious eye irritation.
- Chronic (Delayed)** • No data available.
- Ingestion**
- Acute (Immediate)** • Material may be aspirated into lungs during ingestion and/or subsequent vomiting. Aspiration of this material will cause severe lung injury, chemical pneumonitis, pulmonary edema or death.
- Chronic (Delayed)** • No data available.
- Other**
- Chronic (Delayed)** • Excessive exposure to n-hexane can result in peripheral neuropathies. The initial symptoms are symmetrical sensory numbness and paresthesias of distal portions of the extremities. Motor weakness is typically observed in muscles of the toes and fingers 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. The neurotoxic properties of n-hexane are potentiated by exposure to methyl ethyl ketone and methyl isobutyl ketone.
- Mutagenic Effects** • Animal studies show a component of this material may cause mutagenic effects.
- Carcinogenic Effects** • May cause cancer. Two year inhalation studies of vaporized unleaded gasoline produced an increased incidence of kidney tumors in male rats and liver tumors in female mice. Repeated skin application of various petroleum naphthas in mice for two years resulted in an increased incidence of skin tumors but only in the presence of severe skin irritation. Follow-up mechanistic studies suggest that the occurrence of these tumors may be the consequence of promotional processes and not relevant to human risk assessment. Epidemiology data collected from a study of more than 18,000 petroleum marketing and distribution workers showed no increased risk of leukemia, multiple myeloma, or kidney cancer from gasoline exposure. Unleaded gasoline has been identified as a possible carcinogen by the International Agency for Research on Cancer.

Carcinogenic Effects				
	CAS	OSHA	IARC	NTP
Benzene	71-43-2	Specifically Regulated Carcinogen	Group 1-Carcinogenic	Known Human Carcinogen
Ethylbenzene	100-41-4	Not Listed	Group 2B-Possible Carcinogen	Not Listed

- Reproductive Effects** • A component of this material may cause reproductive effects based on animal studies.

Key to abbreviations

LC = Lethal Concentration

LD = Lethal Dose

TC = Toxic Concentration

TD = Toxic Dose

Section 12 - Ecological Information

Toxicity

- Acute aquatic toxicity studies on samples of gasoline and naphtha streams show acute toxicity values greater than 1 mg/L and mostly in the range 1-100 mg/L. These tests were carried out on water accommodated fractions, in closed systems to prevent evaporative loss. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. These substances should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment.

Persistence and degradability

- The hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by microorganisms.

Bioaccumulative potential

- Log Kow values measured for the hydrocarbon components of this material range from 3 to greater than 6 and therefore are regarded as having the potential to bioaccumulate. In practice, metabolic processes or physical properties may prevent this effect or limit bioavailability.

Mobility in Soil

- On release to water, hydrocarbons will float on the surface and since they are sparingly soluble, the only significant loss is volatilization to air. In air, these hydrocarbons are photodegraded by reaction with hydroxyl radicals with half lives varying from 6.5 days for benzene to 0.5 days for n-dodecane.

Other adverse effects

- None anticipated.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN1203	Gasoline	3	II	NDA

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code • No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • Acute, Chronic, Fire

Inventory		
Component	CAS	TSCA
1,2,4-Trimethylbenzene	95-63-6	Yes
Benzene	71-43-2	Yes
Cyclohexane	110-82-7	Yes
Ethylbenzene	100-41-4	Yes
Hexane	110-54-3	Yes
Sulfur	7704-34-9	Yes
Toluene	108-88-3	Yes
Xylene	1330-20-7	Yes

United States

Labor

U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - OSHA - Specifically Regulated Chemicals

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	5 ppm STEL (See 29 CFR 1910.1028, 15 min); 0.5 ppm Action Level; 1 ppm TWA
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

Environment

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	(listed under Ethyl benzene)
• Toluene	108-88-3	
• Xylene	1330-20-7	(isomers and mixtures)
• Benzene	71-43-2	(including Benzene from gasoline)
• Hexane	110-54-3	
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• Cyclohexane	110-82-7	1000 lb final RQ; 454 kg final RQ
• Ethylbenzene	100-41-4	1000 lb final RQ; 454 kg final RQ
• Toluene	108-88-3	1000 lb final RQ; 454 kg final RQ
• Xylene	1330-20-7	100 b final RQ; 45.4 kg final RQ
• Benzene	71-43-2	10 lb final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule); 4.54 kg final RQ (received an adjusted RQ of 10 lbs based on potential carcinogenicity in an August 14, 1989 final rule)
• Hexane	110-54-3	5000 lb final RQ; 2270 kg final RQ

• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Radionuclides and Their Reportable Quantities

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• Cyclohexane	110-82-7	1.0 % de minimis concentration
• Ethylbenzene	100-41-4	0.1 % de minimis concentration
• Toluene	108-88-3	1.0 % de minimis concentration
• Xylene	1330-20-7	1.0 % de minimis concentration
• Benzene	71-43-2	0.1 % de minimis concentration
• Hexane	110-54-3	1.0 % de minimis concentration
• 1,2,4-Trimethylbenzene	95-63-6	1.0 % de minimis concentration
• Sulfur	7704-34-9	Not Listed

U.S. - CERCLA/SARA - Section 313 - PBT Chemical Listing

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed

• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

United States - California

Environment

U.S. - California - Proposition 65 - Carcinogens List

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	carcinogen, initial date 6/11/04
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	carcinogen, initial date 2/27/87
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - California - Proposition 65 - Developmental Toxicity

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	developmental toxicity, initial date 1/1/91
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	developmental toxicity, initial date 12/26/97
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - California - Proposition 65 - Maximum Allowable Dose Levels (MADL)

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	7000 µg/day MADL (level represents absorbed dose)
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	24 µg/day MADL (oral); 49 µg/day MADL (inhalation)
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - California - Proposition 65 - No Significant Risk Levels (NSRL)

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	54 µg/day NSRL (inhalation); 41 µg/day NSRL (oral)
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	6.4 µg/day NSRL (oral); 13 µg/day NSRL (inhalation)
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Female

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	female reproductive toxicity, initial date 8/7/09
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	Not Listed
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

U.S. - California - Proposition 65 - Reproductive Toxicity - Male

• Cyclohexane	110-82-7	Not Listed
• Ethylbenzene	100-41-4	Not Listed
• Toluene	108-88-3	Not Listed
• Xylene	1330-20-7	Not Listed
• Benzene	71-43-2	male reproductive toxicity, initial date 12/26/97
• Hexane	110-54-3	Not Listed
• 1,2,4-Trimethylbenzene	95-63-6	Not Listed
• Sulfur	7704-34-9	Not Listed

Other Information

- **WARNING:** This product contains a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

Section 16 - Other Information**Revision Date**

- 09/September/2015

Preparation Date

- 21/March/2013

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Key to abbreviations

NDA = No data available