Material Safety Data Sheet

UNLEADED PREMIUM GASOLINE (Including Reformulated)

February 26, 1999

PHILLIPS 66 COMPANY
A Division of Phillips Petroleum Company
Bartlesville, Oklahoma 74004

PHONE NUMBERS
Emergency: (918) 661-8118
General MSDS Information: (918) 661-3709
For Additional MSDSs: (918) 661-3709

A. Product Identification

Synonyms: Motor Fuel; Petrol
Chemical Name: Mixture
Chemical Family: Hydrocarbon
Chemical Formula: Mixture
CAS Reg. No.: Mixture
Product No.: 1013972(13050); (13051); 1014021(13750) (13751); (13080); (13081) (13180); (13181); 1014006(13170) (13171); (13280); (13281) 1014011(13270); (13271); (13380) (13381); 1014015(13370); (13371)

Product and/or Components Entered on EPA's TSCA Inventory: YES

This product is in U.S. commerce, and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals; hence, it may be subject to applicable TSCA provisions and restrictions.

B. Components

Ingredients	CAS Number	% By Wt.	OSHA PEL	ACGIH TLV
Gasoline, including:	8006-61-9	100	NE	300 ppm
Benzene	71-43-2	<5	10 ppm(1)	0.5 ppm
Toluene	108-88-3	1-35	200 ppm	50 ppm
Ethyl Benzene	100-41-4	0-4	100 ppm	100 ppm
Xylenes (mixed isomers)	1330-20-7	1-10	100 ppm	100 ppm
Methyl-tert-Butyl Ether	1634-04-4	<16	NE	40 ppm
1,2,4-Trimethyl Benzene	95-63-6	0.5-2.5	NE	25 ppm(2)
Isopentane	78-78-4	<20	NE	600 ppm
n-Butane	106-97-8	<10	NE	800 ppm

(1) Areas covered by the Benzene Standard, 29 CFR 1910.1028, will have a 1 ppm 8 hour TWA and 5 ppm STEL.
(2) For Trimethylbenzene

C. Personal Protection Information

Ventilation: Use adequate ventilation to control concentration below recommended exposure limits.

Respiratory Protection: For concentrations exceeding the recommended exposure limit, use appropriate NIOSH approved air purifying respirator. When entry into or exit from concentrations of unknown exposure, use NIOSH approved self-contained breathing apparatus (SCBA).

Eye Protection: Use safety glasses with side shields and face shield for splash protection.

Skin Protection: Use gloves resistant to the material being used. (Viton, nitrile, neoprene). Use full-body, long sleeved garments to prevent skin contact.

NOTE: Personal protection information shown in Section C is based upon general information as to normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the expert assistance of an industrial hygienist or other qualified professional be sought.

D. Handling and Storage Precautions

Do not get in eyes, on skin or on clothing. Do not breathe vapors, mist, fume or dust. Do not swallow. May be aspirated into lungs. Wear protective equipment and/or garments described in Section C if exposure conditions warrant. Wash thoroughly after handling. Launder contaminated clothing before reuse. Use only with adequate ventilation.

Keep away from heat, sparks, and flames. Store in well-ventilated area. Store in tightly closed container. Bond and ground during transfer.

E. Reactivity Data

Stability: Stable
Conditions to Avoid: Not Applicable
Incompatibility (Materials to Avoid): Oxygen and strong oxidizing agents

Hazardous Polymerization: Will Not Occur
Conditions to Avoid: Not Applicable
Hazardous Decomposition Products: Carbon oxides and various hydrocarbons when burned.

F. Health Hazard Data

Recommended Exposure Limits:

See Section B.

Acute Effects of Overexposure:

Eye: May cause mild irritation, with stinging and redness of the eyes.

Skin: May cause mild irritation. Repeated or prolonged contact may cause defatting of the skin, resulting in dermatitis.

Inhalation: May cause headache, nausea, weakness, sedation, and unconsciousness at high concentrations (>300 ppm).

Ingestion: May be slightly irritating to intestines. May cause nausea. If swallowed, may be aspirated resulting in inflammation and possible fluid accumulation in the lungs. The oral LD50, rat, for unleaded gasoline is 18.8 ml/kg.

Subchronic and Chronic Effects of Overexposure:

Unleaded gasoline has produced kidney cancer in male rats only. No comparable kidney disease is known to occur in humans.

Gasolines generally contain benzene which has been designated a carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), and the Occupational Safety and Health Administration (OSHA). Benzene may produce blood changes which include reduced platelets, red blood cells, and white blood cells. Also, aplastic anemia, and acute nonlymphotic leukemia. Benzene has produced fetal death in laboratory animals and caused chromosome changes in humans and mutation changes in cells of other organisms.

Isopentane did not produce kidney damage in a subchronic oral laboratory study or in a subchronic inhalation exposure to 4500 ppm isopentane alone or 1000 ppm of a 50/50 mixture of isobutane and isopentane.

Exposure of pregnant rats during gestation to toluene at levels 250 ppm and higher produced some maternal toxicity and embryo/fetotoxicity. A lifetime inhalation study in rats did not show any toxic effects even at the high dose of 300 ppm.

Behavioural signs of hearing loss were observed in rats exposed to toluene subchronically at levels of 1000 ppm or more. Comparable effects have not been reported in humans.

Inhalation studies were conducted with experimental animals at dose levels that caused signs of toxicity which included central nervous system depression, decreased body weight, increased mortality, and decreased survival time. Methyl-tert-Butyl Ether (MTBE) did not cause neurotoxicity at doses that caused central nervous system depression nor reproductive toxicity at doses that caused parental toxicity. Developmental effects (fetal toxicity) were associated with parental toxicity. Increased incidence of carcinogenic effects (kidneys, testicles, liver) were observed at otherwise toxic concentrations in rodents.

Ethylbenzene has caused fetotoxicity and liver and kidney injury in laboratory animals. No comparable injury has been reported in humans.

Ethylbenzene is a recognized animal carcinogen by the National

Toxicology Program (NTP). There are insufficient data in humans, however, based on the evidence in animals, it is classified as a suspect human carcinogen.
Liver and kidney changes have been noted in long term studies in animals exposed to xylenes. Fetotoxicity has been observed in animals with subchronic exposure to mixed xylenes at concentrations approximately five times the permissible exposure limit.

An epidemiology study of workers exposed to two isomers of trimethylbenzene had symptoms of nervousness, tension and anxiety, and asthmatic bronchitis. In addition, after inhalation of 60 ppm measured as hydrocarbon vapor, the workers' peripheral blood showed a tendency to hypochromic anemia and a deviation from normal in the coagulability of the blood.

Other Health Effects:

Combustion, a normal use of gasoline, results in an exhaust that has been associated with skin cancer in laboratory animals. Skin cancer was observed in these animals when exhaust was concentrated and repeatedly applied to the skin. This is not a normal route of exposure relevant to humans.

Combustion (burning) of most carbon-containing material forms carbon monoxide. Carbon monoxide inhalation may cause carboxyhemoglobinemia. Chronic exposure to carbon monoxide causes fatigue, poor memory, loss of sensation in fingers, visual disturbances and insomnia. Carboxyhemoglobinemia is frequently misdiagnosed as flu.

Sensitive sub-populations to the inhalation of carbon monoxide exist. Carbon monoxide displaces oxygen in the bloodstream and therefore, can adversely effect people with pre-existing heart disease, pregnant women and smokers.

Mutagenicity test results were predominantly negative. Positive results were observed in two in vitro tests (Ames Assay & Sister Chromatid Exchange) after metabolic activation indicating that the positive results were due to MTBE metabolites (formaldehyde or tert-butyl ethanol). In intact living systems (in vivo mutagenicity testing) MTBE did not cause mutagenic activity chromosomal aberrations, unscheduled DNA repair, or mutation in germ cells.

A Toxicity Study Summary for Toluene is available upon request.

A Toxicity Study Summary for Isopentane, Commercial Grade, is available upon request.

Health Hazard Categories:

	Animal	Human		Animal	Human
Known Carcinogen	_X_	_X_	Toxic	___	___
Suspect Carcinogen	___	___	Corrosive	___	___
Mutagen	_X_	___	Irritant	___	___
Teratogen	___	___	Target Organ Toxin	_X_	_X_
Allergic Sensitizer	___	___	Specify - Blood Toxin; Reproductive Toxin - Embryo/Fetotoxin; Lung - Aspiration Hazard;		
Highly Toxic	___	___			

Kidney Toxin; Liver Toxin

First Aid and Emergency Procedures:

Eye: Flush eyes with running water for at least fifteen minutes. If irritation or adverse symptoms develop, seek medical attention.

Skin: Wash skin with soap and water for at least fifteen minutes. If irritation or adverse symptoms develop, seek medical attention.

Inhalation: Remove from exposure. If breathing is difficult, give oxygen. If breathing ceases, administer artificial respiration followed by oxygen. Seek immediate medical attention.

Ingestion: Do not induce vomiting. Seek immediate medical attention.

Note to Physician: Gastric lavage using a cuffed endotracheal tube may be performed at your discretion.

G. Physical Data

Appearance:	Clear to pink liquid
Odor:	Mild
Boiling Point:	75-437F (24-225C)
Vapor Pressure:	7.8-15.0 psia @ 100F (38C)
Vapor Density (Air = 1):	3-4
Solubility in Water:	Negligible
Specific Gravity (H2O = 1):	0.72-0.76 @ 60/60F (16/16C)
Percent Volatile by Volume:	100
Evaporation Rate (Butyl Acetate = 1):	> 1
Viscosity:	Not Established

H. Fire and Explosion Data

Flash Point (Method Used):	<-35F (-37C) (Estimated)
Flammable Limits (% by Volume in Air):	LEL - 1.5 UEL - 7.6
Fire Extinguishing Media:	Dry chemical, foam or carbon dioxide (CO2)
Special Fire Fighting Procedures:	Evacuate area of all unnecessary personnel. Wear appropriate safety equipment for fire conditions including NIOSH self-contained breathing apparatus (SCBA). Shut off source, if possible. Water fog or spray may be used to cool exposed containers and equipment. Do not spray water directly on fire product will float and could be reignited on surface of water.
Fire and Explosion Hazards:	Carbon oxides and various hydrocarbons formed when burned. Highly flammable vapors which are heavier than air may accumulate in low areas and/or spread along ground away from handling site.

Flashback along vapor trail may occur.

I. Spill, Leak and Disposal Procedures

Precautions Required if Material is Released or Spilled:
Evacuate area of all unnecessary personnel. Wear protective equipment and/or garments described in Section C if exposure conditions warrant. Shut off source, if possible and contain spill. Protect from ignition. Keep out of water sources and sewers. Absorb in a dry, inert material (sand, clay, etc). Transfer to disposal drums using non-sparking equipment.

Waste Disposal (Insure Conformity with all Applicable Disposal Regulations):
Incinerate or place in permitted waste management facility.

J. DOT Transportation

Shipping Name: Gasoline
Hazard Class: 3 (Flammable liquid)
ID Number: UN 1203
Packing Group: II
Marking: Gasoline, UN 1203
Label: Flammable liquid
Placard: Flammable/1203
Hazardous Substance/RQ: Not Applicable
Shipping Description: Gasoline, 3 (Flammable liquid), UN 1203, PG II
Packaging References: 49 CFR 173.150, 173.202, 173.242

K. RCRA Classification - Unadulterated Product

Ignitable (D001)

Prior to disposal, consult your environmental contact to determine if TCLP (Toxicity Characteristic Leaching Procedure, EPA Test Method 1311) is required. Reference 40 CFR Part 261.

L. Protection Required for Work on Contaminate

Contact immediate supervisor for specific instructions before work is initiated. Wear protective equipment and/or garments described in Section C if exposure conditions warrant.

M. Hazard Classification

_X_ This product meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200):

___ Combustible Liquid	___ Flammable Aerosol	___ Oxidizer
___ Compressed Gas	___ Explosive	___ Pyrophoric
___ Flammable Gas	_X_ Health Hazard (Section F)	___ Unstable
_X_ Flammable Liquid	___ Organic Peroxide	___ Water Reactive
___ Flammable Solid		

___ Based on information presently available, this product does not meet any of the hazard definitions of 29 CFR Section 1910.1200.

N. Additional Comments

SARA 313

This product contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. (See Section B).

Benzene
Toluene
Methyl-tert-butyl ether
Ethylbenzene
Xylenes (mixed isomers)
1,2,4-Trimethyl Benzene

NFPA 704 Hazard Codes - - - - - - - - Signals

Health :	1
Flammability:	3
Reactivity :	0
Special Haz.:	-

Least - 0
Slight - 1
Moderate - 2
High - 3
Extreme - 4