



Safety Data Sheet

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: SUN ULTRA 93N 10%ETHANOL

Manufacturer Information:

Sunoco, Inc. (R&M)
1735 Market Street LL

Philadelphia, Pennsylvania, 19103-7583
sunocomsds@sunocoinc.com

Product Use:

Motor Fuel

Emergency Phone Numbers:

Chemtrec	(800) 424-9300	24 Hours
Sunoco Inc.	(800) 964-8861	24 Hours

SDS Information:

Product Safety Information	(888) 567-3066
Email	sunocomsds@sunocoinc.com

2. HAZARDS IDENTIFICATION

2.1 Classification

CLP Classification

Hazard Class/Category	Hazard Statement
Flammable Liquid 1	Extremely flammable liquid and vapor H224

Aspiration Toxicity 1	May be fatal if swallowed and enters airways H304
STOT (Single exposure) 3	May cause drowsiness or dizziness by inhalation H336
Skin Irritation 2	Causes skin irritation H315
Acute Tox Inh 4	Harmful if inhaled H332
STOT (Repeated exposure) 1	Causes damage to central nervous system, liver, kidney, cardiovascular and respiratory system through prolonged and repeated exposure H372*
Carcinogen 1A	May cause cancer H350
Reproductive Toxicity 2	Suspected of damaging fertility or the unborn child H361df
Aquatic Environment (Chronic) 2	Toxic to aquatic life with long lasting effects (H411).

2.2 Label Elements

Hazard Pictograms:



DANGER

Hazard Statements

Extremely flammable liquid and vapor (H224). May be fatal if swallowed and enters airways (H304). May cause drowsiness or dizziness by inhalation (H336). Causes damage to central nervous system, liver, kidney, cardiovascular and respiratory system through prolonged and repeated exposure (H372). Harmful if inhaled (H332). Causes skin irritation (H315). Suspected of damaging fertility or the unborn child (H361). May cause cancer (H350). Toxic to aquatic life with long lasting effects (H411).

Precautionary Statements

Obtain special instructions before use (P201). Do not handle until all safety precautions have been read and understood (P202). Keep away from heat/sparks/open flames/hot surfaces – No smoking (P210). Keep container tightly closed (P233). Ground/bond container and receiving equipment (P240). Use explosion-proof electrical/ventilating/light equipment (P241). Use only non-sparking tools (P242). Take precautionary measures against static discharge (P243). Avoid breathing mist, vapor, and spray (P261). Wash hands thoroughly after handling (P264). Do not eat, drink or smoke when using this product (P270). Use only outdoors or in a well-ventilated area (P271). Avoid release to the environment (P273). Wear protective gloves/protective clothing/eye protection/face protection (P280). Use personal protective equipment as required (P281).

IF SWALLOWED (P301): Immediately call a POISON CENTER or doctor/physician (P310). Do NOT induce vomiting (P331). IF ON SKIN (or hair) (P301): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower (P353). If skin irritation occurs (P332): Get medical attention (P313). Wash with plenty of soap and water (P352). IF INHALED (P304): Remove victim to fresh air and keep at rest in a position comfortable for breathing (P340). Call a POISON CENTER or doctor/physician if you feel unwell (P312). Take off contaminated clothing and wash before reuse (P362). In case of fire (P370): Use foam or dry powder for extinction (P378). Collect spillage (P391). Store in well-ventilated place (P403). Keep container tightly closed (P233). Store locked up (P405). Dispose of contents/container to authorized hazardous waste facility (P501).

Precautionary Statements			
Prevention	Response	Storage	Disposal
P2XX	P3XX	P4XX	P5XX

- EMERGENCY OVERVIEW**

Static accumulator. May form an ignitable vapor/air mixture. Vapors may cause flash fire or explosion.

Hazards Ratings:

Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

	<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>PPI</u>
NFPA	1	3	0	
HMIS	2	3	0	X

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
LIGHT PETROLEUM DISTILLATE	8006-61-9	0 - 99.9
TOLUENE	108-88-3	0 - 30
XYLENE	1330-20-7	0 - 25
ETHYL ALCOHOL	64-17-5	0 - 10
CYCLOHEXANE	110-82-7	0 - 9
ETHYL BENZENE	100-41-4	0 - 5
N-HEXANE	110-54-3	0 - 5
NAPHTHALENE	91-20-3	0 - 5
1,2,4-TRIMETHYLBENZENE	95-63-6	0 - 5
BENZENE	71-43-2	0.1 - 4.9
BUTANE	106-97-8	0 - 3
CUMENE	98-82-8	0 - 1

4. FIRST AID MEASURES

- INHALATION**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get immediate medical attention. NOTE TO PHYSICIAN: Catecholamines and similar adrenergic drugs are generally contraindicated because of potential for increased sensitivity of the heart from hydrocarbon overexposure and subsequent ventricular fibrillation. EKG monitoring may be indicated and bronchodilators should be selected with care.

- SKIN**

Immediately flush with large amounts of water for 20 minutes, use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. Get prompt medical attention. Injection injuries may not appear serious at first but within a few hours, without proper treatment, the area will become swollen, discolored and extremely painful. Wash clothing before reuse.

- EYES**

Flush eye with water for 20 minutes. Get medical attention.

- INGESTION**

If swallowed, immediately contact a physician or Poison Control Center. Never give anything by mouth to an intoxicated, unconscious or convulsing person. Get immediate medical attention. Do not induce vomiting!

5. FIRE FIGHTING MEASURES

- EXTINGUISHING MEDIA**

The following media may be used to extinguish a fire involving this material: Water spray; Regular foam; Dry chemical; Carbon dioxide;

- **FIRE FIGHTING INSTRUCTIONS**

Use water spray to cool fire exposed tanks and containers. Wear structural firefighting gear. The use of fresh air equipment such as Self Contained Breathing Apparatus (SCBA) or Supplied Air Respirators should be worn for fire fighting if exposure or potential exposure to products of combustion is expected.

FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point				MINUS 40 EST'D	F	N/A
Autoignition Temperature				536 ESTIMATED	F	N/A
Lower Explosion Limit	1.5				%	N/A
Upper Explosion Limit	7.6				%	N/A

6. ACCIDENTAL RELEASE MEASURES

Prevent ignition, stop leak and ventilate the area. Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Do not use spark-generating metals for sweeping up spilled material. Avoid runoff into storm sewers and ditches which lead to waterways. Vapor can be controlled using a water fog. Water streams should not be directed to the liquid as this will cause the liquid to boil and generate more vapor. Keep personnel upwind from leak. Use appropriate personal protective equipment as stated in Section 8 of this MSDS. Advise the Environmental Protection Agency (EPA) and appropriate state agencies, if required.

7. HANDLING AND STORAGE

- **HANDLING**

Follow all MSDS/label precautions even after container is emptied because it may retain product residue. Use only in a well-ventilated area. **STATIC ACCUMULATOR.** This liquid may form an ignitable vapor-air mixture in closed tanks or containers. This liquid may accumulate static electricity even when transferred into properly grounded containers. Bonding and grounding may be insufficient to remove static electricity. Static electricity accumulation may be significantly increased by the presence of small quantities of water. Always bond receiving container to the fill pipe before and during loading, following NFPA-77 and/or API RP 2003 requirements. Automatic gauging devices and other floats in vessels or tanks which contain static accumulating liquids should be electrically bonded to the shell. Bonding and grounding alone may be inadequate to eliminate fire and explosion hazards associated with electrostatic charges. In addition to bonding and grounding, efforts to mitigate the hazards of an electrostatic discharge may include, but are not limited to, ventilation, inerting and/or reduction of transfer velocities. Always keep the nozzle in contact with the container throughout the loading process. Do not fill any portable containers in or on a vehicle. Special precautions, such as reduced loading rates and increased monitoring, must be observed during "switch loading" operations (i.e. loading this material in tanks or shipping compartments that previously contained middle distillates or similar products). Non-equilibrium conditions may increase the risks associated with static electricity such as tank and container filling, tank cleaning, sampling, gauging, loading, filtering, mixing, agitation, etc. Dissipation of electrostatic charges may be improved with the use of conductivity additives when used with other mitigating efforts, including bonding and grounding. Avoid breathing (dust, vapor, mist, gas). Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Never siphon by mouth. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. **DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.** Empty drums should be completely drained, properly bunged, and promptly returned to a drum reconditioned, or properly disposed of. A static electrical discharge can accumulate when this material is flowing through pipes, nozzles or filters or when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather. Always bond receiving containers to the fill pipe before and during loading. Always keep nozzle in contact with the container throughout the loading process. Do not fill any portable container in or on the vehicle.

- **STORAGE**

Keep away from heat, sparks, and flame. Keep container closed when not in use. Store in a cool dry place. Consult NFPA and / or OSHA codes for additional information. NFPA class IB storage. Flash point is less than 73 degrees F and boiling point is greater than or equal to 100 degrees F. Outside or detached storage is preferred.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

Because benzene is present in this product above 0.1%, federal regulations require handling in a way so as to keep exposure below limits. Prolonged and repeated contact with benzene can result in fatal blood effects ranging from anemia to leukemia. Sun recommends the ACGIH exposure limit of 0.5 parts per million for 8-hours; 5.0 ppm for 15-minutes.

- **ENGINEERING CONTROLS**

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use with adequate ventilation. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

- **PERSONAL PROTECTION**

- **EYE PROTECTION**

Use chemical splash goggles and face shield (ANSI Z87.1 or approved equivalent).

- **GLOVES or HAND PROTECTION**

The glove(s) listed below may provide protection against permeation. Gloves of other chemically resistant materials may not provide adequate protection. Protective gloves are recommended to protect against contact with product. Nitrile (>8 hrs); Viton(8 hrs); Teflon (8 hrs)

- **RESPIRATORY PROTECTION**

Concentration in air determines the level of respiratory protection needed. Use only NIOSH certified respiratory equipment. Half-mask air purifying respirator with organic vapor cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with organic vapor cartridges is acceptable for exposures to fifty (50) times the exposure limit. Exposure should not exceed the cartridge limit of 1000 ppm. Protection by air purifying respirators is limited. Use a positive pressure-demand full-face supplied air respirator or SCBA for exposures greater than fifty (50) times the exposure limit. If exposure is above the IDLH (Immediately Dangerous to Life and Health) or there is the possibility of an uncontrolled release, or exposure levels are unknown, then use a positive pressure-demand full-face supplied air respirator with escape bottle or SCBA. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

- **OTHER**

Where splashing is possible, full chemically resistant protective clothing and boots are required. The following materials are acceptable for use as protective clothing: Nitrile; Viton; Teflon; Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Remove contaminated clothing and wash before reuse. For non-fire emergencies, positive pressure SCBA and structural firefighter's protective clothing will provide only limited protection.

EXPOSURE GUIDELINES

	CAS No.	Governing Body	Exposure Limits		
BENZENE	71-43-2	ACGIH	STEL	2.5	ppm
BENZENE	71-43-2	OSHA	STEL	5	ppm
BENZENE	71-43-2	ACGIH	TWA	0.5	ppm
BENZENE	71-43-2	OSHA	TWA	1	ppm
BUTANE	106-97-8	ACGIH	TWA	1000	ppm
CUMENE	98-82-8	ACGIH	TWA	50	ppm
CUMENE	98-82-8	OSHA	TWA	50	ppm
CYCLOHEXANE	110-82-7	ACGIH	TWA	100	ppm
CYCLOHEXANE	110-82-7	OSHA	TWA	300	ppm
ETHYL ALCOHOL	64-17-5	ACGIH	TWA	1000	ppm
ETHYL ALCOHOL	64-17-5	OSHA	TWA	1000	ppm
ETHYL BENZENE	100-41-4	ACGIH	TWA	20	ppm
ETHYL BENZENE	100-41-4	OSHA	TWA	100	ppm
N-HEXANE	110-54-3	ACGIH	TWA	50	ppm
N-HEXANE	110-54-3	OSHA	TWA	500	ppm
NAPHTHALENE	91-20-3	ACGIH	STEL	15	ppm

NAPHTHALENE	91-20-3	ACGIH	TWA	10	ppm
NAPHTHALENE	91-20-3	OSHA	TWA	10	ppm
TOLUENE	108-88-3	NIOSH	STEL	150	ppm
TOLUENE	108-88-3	ACGIH	TWA	20	ppm
TOLUENE	108-88-3	OSHA	TWA	200	ppm
XYLENE	1330-20-7	ACGIH	STEL	150	ppm
XYLENE	1330-20-7	ACGIH	TWA	100	ppm
XYLENE	1330-20-7	OSHA	TWA	100	ppm
LIGHT PETROLEUM DISTILLATE	8006-61-9	ACGIH	STEL	500	ppm
LIGHT PETROLEUM DISTILLATE	8006-61-9	ACGIH	TWA	300	ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Property	Typical	Units	Method
Appearance	Clear Liquid	N/A	Unknown
Boiling Point (Initial)	100	F	ASTM D 86
	38	C	
Boiling Range	100-400	F	ASTM D 86
	38-204	C	
Liquid Conductivity	<50 varies	pS/m	Reference Value
Flash Point	- 40 Est. -40	F C	Reference Value
Melting Point	No Data	F	
pH	Not Applicable		
Octanol/Water Partition Coefficient	2-7	N/A	Reference Value
Lower Explosion Limit	1.5	%	Reference Value
Upper Explosion Limit	7.6	%	Reference Value
Specific Gravity	0.76	N/A	ASTM D 287
Solubility In Water	NIL TO 10%	wt %	Reference Value
Odor	Gasoline Odor.		Reference Value
Evaporation Rate	No data		
Decomposition temp	No data		
Odor Threshold	<1	ppm	Reference Value
Flammability			
Vapor Pressure	5 - 16	psia	Reference Value
Viscosity (F)	no data	SUS	ASTM D 5191
Viscosity (C)	no data	CsT	
% Volatile	100	wt %	Reference Value
Auto Ignition	536 Est. 280 Est.	F C	Reference Value

10. STABILITY AND REACTIVITY

- **STABILITY**

Stable

- **CONDITIONS TO AVOID**

Avoid heat, sparks and open flame. Avoid static discharge.

- **INCOMPATIBILITY**

The following materials are incompatible with this product: Strong oxidizers, Alkaline materials, Acids, Chlorine, concentrated oxygen; Halogens and halogenated compounds; Hydrogen peroxide;

- **HAZARDOUS DECOMPOSITION PRODUCTS**

Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.

- **HAZARDOUS POLYMERIZATION**

Will not polymerize.

11. TOXICOLOGY INFORMATION

- **POTENTIAL HEALTH EFFECTS**

- **PRE-EXISTING MEDICAL CONDITIONS**

The following diseases or disorders may be aggravated by exposure to this product: skin, eye, blood forming organs, nervous system, respiratory system, lung (asthma-like conditions), cardiovascular system, liver, kidney,

- **Acute Toxicity:** Samples of gasoline and a number of low boiling point naphtha streams have been tested in acute oral, dermal and inhalation studies. Results indicate the following:
 - **Oral:** Rat oral LD₅₀ > 5000 mg/kg bodyweight (ARCO, 1986b)
 - **Inhalation:** Rat inhalation LC₅₀ > 5.2 mg/l (ARCO, 1992)
 - **Dermal:** Rabbit dermal LD₅₀ > 2000 mg/kg bodyweight (ARCO, 1986a)
- **Skin Corrosion / Irritation:** Samples of gasoline and a number of low boiling point naphtha streams have been tested in rabbit skin irritation studies. The majority of the data were derived using a 24 hour occluded exposure protocol. The degree of dermal irritation observed was variable, ranging from slight to moderate/severe, normally persisting for up to 14 days. There was no evidence of skin corrosion. Heavier, aromatic materials caused more irritation than lighter, paraffinic streams (API, 1995).
- **Serious Eye Damage / Irritation:** The effects of gasoline and low boiling point naphtha streams on the eye have been investigated in rabbits using a number of samples. None of the samples tested showed more than minimal redness and swelling, which resolved quickly (ARCO, 1986d).
- **Respiratory or Skin Sensitization:** Tests in guinea pigs with gasoline and a number of low boiling point naphtha streams showed no evidence of skin sensitization (ARCO, 1986c). There are no reports available to indicate that gasoline or low boiling point naphthas have the potential to cause respiratory sensitization.
- **Germ Cell Mutagenicity:** The mutagenic potential of gasoline and low boiling point naphthas has been extensively studied in a range of *in vivo* and *in vitro* assays. The majority of the studies showed no evidence of mutagenic activity. Gasoline and low boiling point naphthas can contain benzene, a constituent that is classified as a germ cell mutagen (API, 1977; API, 2005).
- **Carcinogenicity:** The carcinogenic potential of gasoline has been investigated in rats and mice following inhalation exposure for 2 years. In rats, there was an increased incidence of kidney tumours in males and in mice there was an increased incidence of liver tumours in females; further work has shown that these tumours are sex and species specific and are not considered relevant to humans (Short BG *et al.*, 1989). Results of 2 year skin painting studies with gasoline or low boiling point naphthas have shown either no, or weak potential (low incidence and long latent period) for the development of skin tumours. Additional work has shown that where tumours arise

they are most likely a result of a non-genotoxic response due to dermal irritation (API, 1983). Gasoline and low boiling point naphthas can contain benzene, a constituent that is classified as a human carcinogen.

- **Reproductive Toxicity:** Results of guideline developmental toxicity studies on gasolines and OECD developmental toxicity screening studies with low boiling point naphtha streams showed no evidence of developmental toxicity in rats (Roberts L et al, 2001). Similarly, studies in rats with gasoline did not show any effect on reproductive performance (McKee RH et al, 2000). Gasoline and low boiling point naphthas can contain amounts of toluene and/or n-hexane, constituents that are classified as reprotoxicants.
- **Specific Target Organ Toxicity (STOT)**
 - **Single Exposure:** Acute exposure studies show no evidence of systemic toxicity, other than a potential to cause narcosis / CNS depression at higher exposure concentrations (Drinker P et al, 1943; Davis A et al 1960).
 - **Repeated Exposure:** The repeat dose toxicity of gasoline and low boiling point naphthas has been studied in rats following dermal and inhalation exposure for periods between 10 days and up to 2 years. The effects of repeated inhalation exposure of primates to gasoline have also been studied. In dermal studies, no systemic toxicity has been seen; the only effect observed was moderate to severe dermal irritation. Repeated inhalation exposure causes 'light hydrocarbon nephropathy' in male rats, an effect which is considered to be both sex and species specific. (Halder CA et al, 1985; API, 2005; ARCO, 1986e)
- **Aspiration:** Gasoline and low boiling point naphthas are low viscosity, mobile hydrocarbon liquids with a viscosity at 40°C of < 7 mm²/s.

Additional Toxicology Information

Because **benzene** is present in this product above 0.1%, federal regulations require handling in a way so as to keep exposure below limits. Prolonged and repeated contact with benzene can result in fatal blood effects ranging from anemia to leukemia. Sun recommends the ACGIH exposure limit of 0.5 parts per million for 8-hours; 5.0 ppm for 15-minutes.

Component Toxicity Information

Cumene may be harmful or fatal if swallowed. Pulmonary aspiration hazard. After ingestion, may enter lungs and cause damage. May cause respiratory irritation, fluid in the lungs and lung damage. May be irritating to the skin and eyes. May cause nervous system effects, including drowsiness, dizziness, coma and even death. Overexposure has caused kidney, nose, and liver damage in laboratory animals. Following inhalation exposure, an increased tumor incidence has been observed in experimental animals. The significance of this finding to human health is presently unknown. **Ethylbenzene**, a component of this product, has been designated by the International Agency for Research on Cancer as "possibly carcinogenic to humans", based on increased tumor incidence in laboratory animals. Overexposure may lead to nervous system effects, including drowsiness, dizziness, nausea, headaches, paralysis, loss of consciousness and even death. Repeated overexposure has caused a hearing loss in laboratory animals. Hours of exposure to high airborne concentrations of **toluene** and **xylene**, minor components of this product, has caused a hearing loss in laboratory animals. Most adverse health effects associated with **ethanol**, a component of this material, are related to the chronic ingestion of alcoholic beverages. Alcoholism has been associated with liver, stomach, heart, and nervous system damage, cancer, adverse reproductive effects, and effects on the developing fetus. Many of these effects may be related to metabolic changes that result from constantly high blood levels of alcohol. This exposure pattern is significantly different from that of persons handling industrial ethanol in the workplace or from refueling cars with gasoline containing ethanol.

12. ECOLOGICAL INFORMATION

Gasoline spills are toxic to fish and aquatic flora.

- **Acute (short-term) Aquatic Hazard:** Acute aquatic toxicity studies with fish, invertebrates and algae on samples of gasoline and low boiling point naphtha streams show acute toxicity values in the range 1-10 mg/l. These tests were carried out on water accommodated fractions, and in closed systems to prevent evaporative loss. (EBSI 1995a,b,c, CONCAWE, 1996, Petroleum Product Steward Council, 1995)

Chronic (long-term) Aquatic Hazard:

- **Chronic aquatic toxicity:** A chronic toxicity study in daphnia with an alkylate naphtha stream gave a NOELR of 2.6 mg/l (Springborn Laboratories, 1999).

Environmental fate (biodegradation / bioaccumulation): Substance is a hydrocarbon UVCB. Standard tests for biodegradation / bioaccumulation are intended for single substances and are not appropriate for complex substances. Based on compositional information available and measured or predicted data on key constituents, gasoline and gasoline naphthas are not expected to meet the criteria for ready degradability but are inherently biodegradable. Constituents of gasoline naphthas show measured or predicted values for $\log K_{ow} \geq 3$ and are considered potentially bioaccumulative.

13. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. This material is a RCRA hazardous waste. Do not flush material to drain or storm sewer. Contract to authorized disposal service.

14. TRANSPORT INFORMATION

Governing Body	DOT
Mode	Ground
Proper Shipping Name	Ethanol and gasoline mixture
Hazard Class	3 (Flammable liquid)
Packing Group	II
UN/UN No.	UN 3475
Label	Flammable
Governing Body	ARD/RID
Mode	Ground
Proper Shipping Name	Ethanol and gasoline mixture
Hazard Class	3 (Flammable liquid)
Packing Group	II
UN/UN No.	UN 3475
Label	Flammable
Flashpoint	-40 F
Governing Body	IMDG
Mode	Vessel
Proper Shipping Name	Ethanol and gasoline mixture
Hazard Class	3 (Flammable liquid)
Packing Group	II
UN/UN No.	UN 3475
Label	Flammable
Flash point	-40 F cc

15. REGULATORY INFORMATION

This product contains the following EPCRA section 313 chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372): Maximum Wt%: Toulene- CAS Number 108-88-3, 35%; Xylene- CAS Number 1330-20-7, 29%; Cyclohexane- CAS Number 110-82-7, 9.5%; Ethyl benzene- CAS Number 100-41-4, 6%; N-Hexane- CAS Number 110-54-3, 4.5%; Naphthalene- CAS Number 91-20-3, 8%; 1,2,4-Trimethylbenzene- CAS Number 95-63-6, 6%; Benzene- CAS Number 71-43-2, 5.8%; Cumene- CAS Number 98-82-8, 1.2%. This information must be included in all MSDSs that are copied and distributed for this material.

Regulatory List	Component	CAS No.
ACGIH - Occupational Exposure Limits - Carcinogens	BENZENE	71-43-2
ACGIH - Occupational Exposure Limits - Carcinogens	ETHYL ALCOHOL	64-17-5
ACGIH - Occupational Exposure Limits - Carcinogens	ETHYL BENZENE	100-41-4
ACGIH - Occupational Exposure Limits - Carcinogens	NAPHTHALENE	91-20-3
ACGIH - Occupational Exposure Limits - Carcinogens	TOLUENE	108-88-3
ACGIH - Occupational Exposure Limits - Carcinogens	XYLENE	1330-20-7
ACGIH - Occupational Exposure Limits - TWAs	BENZENE	71-43-2
ACGIH - Occupational Exposure Limits - TWAs	BUTANE	106-97-8
ACGIH - Occupational Exposure Limits - TWAs	CUMENE	98-82-8

ACGIH - Occupational Exposure Limits - TWAs	CYCLOHEXANE	110-82-7
ACGIH - Occupational Exposure Limits - TWAs	ETHYL BENZENE	100-41-4
ACGIH - Occupational Exposure Limits - TWAs	N-HEXANE	110-54-3
ACGIH - Occupational Exposure Limits - TWAs	NAPHTHALENE	91-20-3
ACGIH - Occupational Exposure Limits - TWAs	TOLUENE	108-88-3
ACGIH - Occupational Exposure Limits - TWAs	XYLENE	1330-20-7
ACGIH - Short Term Exposure Limits	BENZENE	71-43-2
ACGIH - Short Term Exposure Limits	ETHYL ALCOHOL	64-17-5
ACGIH - Short Term Exposure Limits	ETHYL BENZENE	100-41-4
ACGIH - Short Term Exposure Limits	NAPHTHALENE	91-20-3
ACGIH - Short Term Exposure Limits	XYLENE	1330-20-7
ACGIH - Skin Absorption Designation	BENZENE	71-43-2
ACGIH - Skin Absorption Designation	N-HEXANE	110-54-3
ACGIH - Skin Absorption Designation	NAPHTHALENE	91-20-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	BENZENE	71-43-2
CAA (Clean Air Act) - HON Rule - Organic HAPs	CUMENE	98-82-8
CAA (Clean Air Act) - HON Rule - Organic HAPs	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - HON Rule - Organic HAPs	N-HEXANE	110-54-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	NAPHTHALENE	91-20-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - Organic HAPs	XYLENE	1330-20-7
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	BENZENE	71-43-2
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	CUMENE	98-82-8
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	CYCLOHEXANE	110-82-7
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	ETHYL BENZENE	100-41-4
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	N-HEXANE	110-54-3
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	NAPHTHALENE	91-20-3
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	TOLUENE	108-88-3
CAA (Clean Air Act) - HON Rule - SOCMi Chemicals	XYLENE	1330-20-7
CAA - 1990 Hazardous Air Pollutants	BENZENE	71-43-2
CAA - 1990 Hazardous Air Pollutants	CUMENE	98-82-8
CAA - 1990 Hazardous Air Pollutants	ETHYL BENZENE	100-41-4
CAA - 1990 Hazardous Air Pollutants	N-HEXANE	110-54-3
CAA - 1990 Hazardous Air Pollutants	NAPHTHALENE	91-20-3
CAA - 1990 Hazardous Air Pollutants	TOLUENE	108-88-3
CAA - 1990 Hazardous Air Pollutants	XYLENE	1330-20-7
California - Prop. 65 - Developmental Toxicity	BENZENE	71-43-2
California - Prop. 65 - Developmental Toxicity	ETHYL ALCOHOL	64-17-5
California - Prop. 65 - Developmental Toxicity	TOLUENE	108-88-3
California - Prop. 65 - Reproductive - Female	TOLUENE	108-88-3
California - Prop. 65 - Reproductive - Male	BENZENE	71-43-2
California - Proposition 65 - Carcinogens List	BENZENE	71-43-2
California - Proposition 65 - Carcinogens List	ETHYL BENZENE	100-41-4
California - Proposition 65 - Carcinogens List	NAPHTHALENE	91-20-3
Canada - WHMIS - Ingredient Disclosure	1,2,4-TRIMETHYLBENZENE	95-63-6
Canada - WHMIS - Ingredient Disclosure	BUTANE	106-97-8
Canada - WHMIS - Ingredient Disclosure	CYCLOHEXANE	110-82-7
Canada - WHMIS - Ingredient Disclosure	ETHYL ALCOHOL	64-17-5
Canada - WHMIS - Ingredient Disclosure	ETHYL BENZENE	100-41-4
Canada - WHMIS - Ingredient Disclosure	N-HEXANE	110-54-3
Canada - WHMIS - Ingredient Disclosure	TOLUENE	108-88-3
CERCLA/SARA - Haz Substances and their RQs	BENZENE	71-43-2
CERCLA/SARA - Haz Substances and their RQs	CUMENE	98-82-8
CERCLA/SARA - Haz Substances and their RQs	CYCLOHEXANE	110-82-7
CERCLA/SARA - Haz Substances and their RQs	ETHYL BENZENE	100-41-4
CERCLA/SARA - Haz Substances and their RQs	N-HEXANE	110-54-3
CERCLA/SARA - Haz Substances and their RQs	NAPHTHALENE	91-20-3
CERCLA/SARA - Haz Substances and their RQs	TOLUENE	108-88-3
CERCLA/SARA - Haz Substances and their RQs	XYLENE	1330-20-7
CERCLA/SARA - Section 313 - Emission Reporting	1,2,4-TRIMETHYLBENZENE	95-63-6
CERCLA/SARA - Section 313 - Emission Reporting	BENZENE	71-43-2
CERCLA/SARA - Section 313 - Emission Reporting	CUMENE	98-82-8

CERCLA/SARA - Section 313 - Emission Reporting	CYCLOHEXANE	110-82-7
CERCLA/SARA - Section 313 - Emission Reporting	ETHYL BENZENE	100-41-4
CERCLA/SARA - Section 313 - Emission Reporting	N-HEXANE	110-54-3
CERCLA/SARA - Section 313 - Emission Reporting	NAPHTHALENE	91-20-3
CERCLA/SARA - Section 313 - Emission Reporting	TOLUENE	108-88-3
CERCLA/SARA - Section 313 - Emission Reporting	XYLENE	1330-20-7
CWA (Clean Water Act) - Hazardous Substances	BENZENE	71-43-2
CWA (Clean Water Act) - Hazardous Substances	CYCLOHEXANE	110-82-7
CWA (Clean Water Act) - Hazardous Substances	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Hazardous Substances	NAPHTHALENE	91-20-3
CWA (Clean Water Act) - Hazardous Substances	TOLUENE	108-88-3
CWA (Clean Water Act) - Hazardous Substances	XYLENE	1330-20-7
CWA (Clean Water Act) - Priority Pollutants	BENZENE	71-43-2
CWA (Clean Water Act) - Priority Pollutants	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Priority Pollutants	NAPHTHALENE	91-20-3
CWA (Clean Water Act) - Priority Pollutants	TOLUENE	108-88-3
CWA (Clean Water Act) - Toxic Pollutants	BENZENE	71-43-2
CWA (Clean Water Act) - Toxic Pollutants	ETHYL BENZENE	100-41-4
CWA (Clean Water Act) - Toxic Pollutants	NAPHTHALENE	91-20-3
CWA (Clean Water Act) - Toxic Pollutants	TOLUENE	108-88-3
CWA (Clean Water Act) - Toxic Pollutants	BENZENE	71-43-2
IARC - Group 1 (carcinogenic to humans)	ETHYL ALCOHOL	64-17-5
IARC - Group 1 (carcinogenic to humans)	ETHYL BENZENE	100-41-4
IARC - Group 2B (Possibly carcinogenic to humans)	LIGHT PETROLEUM	8006-61-9
IARC - Group 2B (Possibly carcinogenic to humans)	DISTILLATE	
IARC - Group 2B (Possibly carcinogenic to humans)	NAPHTHALENE	91-20-3
IARC - Group 3 (not classifiable)	TOLUENE	108-88-3
IARC - Group 3 (not classifiable)	XYLENE	1330-20-7
Inventory - Australia (AICS)	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Australia (AICS)	BENZENE	71-43-2
Inventory - Australia (AICS)	BUTANE	106-97-8
Inventory - Australia (AICS)	CUMENE	98-82-8
Inventory - Australia (AICS)	CYCLOHEXANE	110-82-7
Inventory - Australia (AICS)	ETHYL ALCOHOL	64-17-5
Inventory - Australia (AICS)	ETHYL BENZENE	100-41-4
Inventory - Australia (AICS)	LIGHT PETROLEUM	8006-61-9
Inventory - Australia (AICS)	DISTILLATE	
Inventory - Australia (AICS)	N-HEXANE	110-54-3
Inventory - Australia (AICS)	NAPHTHALENE	91-20-3
Inventory - Australia (AICS)	TOLUENE	108-88-3
Inventory - Australia (AICS)	XYLENE	1330-20-7
Inventory - Canada - Domestic Substances List	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Canada - Domestic Substances List	BENZENE	71-43-2
Inventory - Canada - Domestic Substances List	BUTANE	106-97-8
Inventory - Canada - Domestic Substances List	CUMENE	98-82-8
Inventory - Canada - Domestic Substances List	CYCLOHEXANE	110-82-7
Inventory - Canada - Domestic Substances List	ETHYL ALCOHOL	64-17-5
Inventory - Canada - Domestic Substances List	ETHYL BENZENE	100-41-4
Inventory - Canada - Domestic Substances List	LIGHT PETROLEUM	8006-61-9
Inventory - Canada - Domestic Substances List	DISTILLATE	
Inventory - Canada - Domestic Substances List	N-HEXANE	110-54-3
Inventory - Canada - Domestic Substances List	NAPHTHALENE	91-20-3
Inventory - Canada - Domestic Substances List	TOLUENE	108-88-3
Inventory - Canada - Domestic Substances List	XYLENE	1330-20-7
Inventory - China	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - China	BENZENE	71-43-2
Inventory - China	BUTANE	106-97-8
Inventory - China	CUMENE	98-82-8
Inventory - China	CYCLOHEXANE	110-82-7
Inventory - China	ETHYL ALCOHOL	64-17-5
Inventory - China	ETHYL BENZENE	100-41-4
Inventory - China	LIGHT PETROLEUM	8006-61-9

Inventory - China	DISTILLATE	
Inventory - China	N-HEXANE	110-54-3
Inventory - China	NAPHTHALENE	91-20-3
Inventory - China	TOLUENE	108-88-3
Inventory - China	XYLENE	1330-20-7
Inventory - European EINECS Inventory	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - European EINECS Inventory	BENZENE	71-43-2
Inventory - European EINECS Inventory	BUTANE	106-97-8
Inventory - European EINECS Inventory	CUMENE	98-82-8
Inventory - European EINECS Inventory	CYCLOHEXANE	110-82-7
Inventory - European EINECS Inventory	ETHYL ALCOHOL	64-17-5
Inventory - European EINECS Inventory	ETHYL BENZENE	100-41-4
Inventory - European EINECS Inventory	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - European EINECS Inventory	N-HEXANE	110-54-3
Inventory - European EINECS Inventory	NAPHTHALENE	91-20-3
Inventory - European EINECS Inventory	TOLUENE	108-88-3
Inventory - European EINECS Inventory	XYLENE	1330-20-7
Inventory - Japan - (ENCS)	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Japan - (ENCS)	BENZENE	71-43-2
Inventory - Japan - (ENCS)	BUTANE	106-97-8
Inventory - Japan - (ENCS)	CUMENE	98-82-8
Inventory - Japan - (ENCS)	CYCLOHEXANE	110-82-7
Inventory - Japan - (ENCS)	ETHYL ALCOHOL	64-17-5
Inventory - Japan - (ENCS)	ETHYL BENZENE	100-41-4
Inventory - Japan - (ENCS)	N-HEXANE	110-54-3
Inventory - Japan - (ENCS)	NAPHTHALENE	91-20-3
Inventory - Japan - (ENCS)	TOLUENE	108-88-3
Inventory - Japan - (ENCS)	XYLENE	1330-20-7
Inventory - Korea - Existing and Evaluated	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Korea - Existing and Evaluated	BENZENE	71-43-2
Inventory - Korea - Existing and Evaluated	BUTANE	106-97-8
Inventory - Korea - Existing and Evaluated	CUMENE	98-82-8
Inventory - Korea - Existing and Evaluated	CYCLOHEXANE	110-82-7
Inventory - Korea - Existing and Evaluated	ETHYL ALCOHOL	64-17-5
Inventory - Korea - Existing and Evaluated	ETHYL BENZENE	100-41-4
Inventory - Korea - Existing and Evaluated	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - Korea - Existing and Evaluated	N-HEXANE	110-54-3
Inventory - Korea - Existing and Evaluated	NAPHTHALENE	91-20-3
Inventory - Korea - Existing and Evaluated	TOLUENE	108-88-3
Inventory - Korea - Existing and Evaluated	XYLENE	1330-20-7
Inventory - Philippines Inventory (PICCS)	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - Philippines Inventory (PICCS)	BENZENE	71-43-2
Inventory - Philippines Inventory (PICCS)	BUTANE	106-97-8
Inventory - Philippines Inventory (PICCS)	CUMENE	98-82-8
Inventory - Philippines Inventory (PICCS)	CYCLOHEXANE	110-82-7
Inventory - Philippines Inventory (PICCS)	ETHYL ALCOHOL	64-17-5
Inventory - Philippines Inventory (PICCS)	ETHYL BENZENE	100-41-4
Inventory - Philippines Inventory (PICCS)	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - Philippines Inventory (PICCS)	N-HEXANE	110-54-3
Inventory - Philippines Inventory (PICCS)	NAPHTHALENE	91-20-3
Inventory - Philippines Inventory (PICCS)	TOLUENE	108-88-3
Inventory - Philippines Inventory (PICCS)	XYLENE	1330-20-7
Inventory - TSCA - Sect. 8(b) Inventory	1,2,4-TRIMETHYLBENZENE	95-63-6
Inventory - TSCA - Sect. 8(b) Inventory	BENZENE	71-43-2
Inventory - TSCA - Sect. 8(b) Inventory	BUTANE	106-97-8
Inventory - TSCA - Sect. 8(b) Inventory	CUMENE	98-82-8
Inventory - TSCA - Sect. 8(b) Inventory	CYCLOHEXANE	110-82-7
Inventory - TSCA - Sect. 8(b) Inventory	ETHYL ALCOHOL	64-17-5
Inventory - TSCA - Sect. 8(b) Inventory	ETHYL BENZENE	100-41-4

Inventory - TSCA - Sect. 8(b) Inventory	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Inventory - TSCA - Sect. 8(b) Inventory	N-HEXANE	110-54-3
Inventory - TSCA - Sect. 8(b) Inventory	NAPHTHALENE	91-20-3
Inventory - TSCA - Sect. 8(b) Inventory	TOLUENE	108-88-3
Inventory - TSCA - Sect. 8(b) Inventory	XYLENE	1330-20-7
Massachusetts - Right To Know List	1,2,4-TRIMETHYLBENZENE	95-63-6
Massachusetts - Right To Know List	BENZENE	71-43-2
Massachusetts - Right To Know List	BUTANE	106-97-8
Massachusetts - Right To Know List	CUMENE	98-82-8
Massachusetts - Right To Know List	CYCLOHEXANE	110-82-7
Massachusetts - Right To Know List	ETHYL ALCOHOL	64-17-5
Massachusetts - Right To Know List	ETHYL BENZENE	100-41-4
Massachusetts - Right To Know List	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
Massachusetts - Right To Know List	N-HEXANE	110-54-3
Massachusetts - Right To Know List	NAPHTHALENE	91-20-3
Massachusetts - Right To Know List	TOLUENE	108-88-3
Massachusetts - Right To Know List	XYLENE	1330-20-7
New Jersey - Department of Health RTK List	1,2,4-TRIMETHYLBENZENE	95-63-6
New Jersey - Department of Health RTK List	BENZENE	71-43-2
New Jersey - Department of Health RTK List	BUTANE	106-97-8
New Jersey - Department of Health RTK List	CUMENE	98-82-8
New Jersey - Department of Health RTK List	CYCLOHEXANE	110-82-7
New Jersey - Department of Health RTK List	ETHYL ALCOHOL	64-17-5
New Jersey - Department of Health RTK List	ETHYL BENZENE	100-41-4
New Jersey - Department of Health RTK List	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
New Jersey - Department of Health RTK List	N-HEXANE	110-54-3
New Jersey - Department of Health RTK List	NAPHTHALENE	91-20-3
New Jersey - Department of Health RTK List	TOLUENE	108-88-3
New Jersey - Department of Health RTK List	XYLENE	1330-20-7
New Jersey - Env Hazardous Substances List	1,2,4-TRIMETHYLBENZENE	95-63-6
New Jersey - Env Hazardous Substances List	BENZENE	71-43-2
New Jersey - Env Hazardous Substances List	BUTANE	106-97-8
New Jersey - Env Hazardous Substances List	CUMENE	98-82-8
New Jersey - Env Hazardous Substances List	CYCLOHEXANE	110-82-7
New Jersey - Env Hazardous Substances List	ETHYL BENZENE	100-41-4
New Jersey - Env Hazardous Substances List	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
New Jersey - Env Hazardous Substances List	N-HEXANE	110-54-3
New Jersey - Env Hazardous Substances List	NAPHTHALENE	91-20-3
New Jersey - Env Hazardous Substances List	TOLUENE	108-88-3
New Jersey - Env Hazardous Substances List	XYLENE	1330-20-7
New Jersey - Special Hazardous Substances	BENZENE	71-43-2
New Jersey - Special Hazardous Substances	BUTANE	106-97-8
New Jersey - Special Hazardous Substances	CUMENE	98-82-8
New Jersey - Special Hazardous Substances	CYCLOHEXANE	110-82-7
New Jersey - Special Hazardous Substances	ETHYL ALCOHOL	64-17-5
New Jersey - Special Hazardous Substances	ETHYL BENZENE	100-41-4
New Jersey - Special Hazardous Substances	LIGHT PETROLEUM	8006-61-9
	DISTILLATE	
New Jersey - Special Hazardous Substances	N-HEXANE	110-54-3
New Jersey - Special Hazardous Substances	NAPHTHALENE	91-20-3
New Jersey - Special Hazardous Substances	TOLUENE	108-88-3
New Jersey - Special Hazardous Substances	XYLENE	1330-20-7
NTP - Report on Carcinogens - Known Carcinogens	BENZENE	71-43-2
NTP - Report on Carcinogens - Suspect Carcinogens	NAPHTHALENE	91-20-3
OSHA - Final PELs - Ceiling Limits	BENZENE	71-43-2
OSHA - Final PELs - Ceiling Limits	TOLUENE	108-88-3
OSHA - Final PELs - Short Term Exposure Limits	BENZENE	71-43-2
OSHA - Final PELs - Skin Notations	CUMENE	98-82-8

OSHA - Final PELs - Time Weighted Averages	BENZENE	71-43-2
OSHA - Final PELs - Time Weighted Averages	CUMENE	98-82-8
OSHA - Final PELs - Time Weighted Averages	CYCLOHEXANE	110-82-7
OSHA - Final PELs - Time Weighted Averages	ETHYL ALCOHOL	64-17-5
OSHA - Final PELs - Time Weighted Averages	ETHYL BENZENE	100-41-4
OSHA - Final PELs - Time Weighted Averages	N-HEXANE	110-54-3
OSHA - Final PELs - Time Weighted Averages	NAPHTHALENE	91-20-3
OSHA - Final PELs - Time Weighted Averages	TOLUENE	108-88-3
OSHA - Final PELs - Time Weighted Averages	XYLENE	1330-20-7
Pennsylvania - RTK (Right to Know) List	1,2,4-TRIMETHYLBENZENE	95-63-6
Pennsylvania - RTK (Right to Know) List	BENZENE	71-43-2
Pennsylvania - RTK (Right to Know) List	BUTANE	106-97-8
Pennsylvania - RTK (Right to Know) List	CUMENE	98-82-8
Pennsylvania - RTK (Right to Know) List	CYCLOHEXANE	110-82-7
Pennsylvania - RTK (Right to Know) List	ETHYL ALCOHOL	64-17-5
Pennsylvania - RTK (Right to Know) List	ETHYL BENZENE	100-41-4
Pennsylvania - RTK (Right to Know) List	N-HEXANE	110-54-3
Pennsylvania - RTK (Right to Know) List	NAPHTHALENE	91-20-3
Pennsylvania - RTK (Right to Know) List	TOLUENE	108-88-3
Pennsylvania - RTK (Right to Know) List	XYLENE	1330-20-7
Pennsylvania - RTK - Special Hazardous Substances	BENZENE	71-43-2
TSCA - Sect. 12(b) - Export Notification	NAPHTHALENE	91-20-3
TSCA - Section 4 - Chemical Test Rules	CYCLOHEXANE	110-82-7
TSCA - Section 4 - Chemical Test Rules	NAPHTHALENE	91-20-3

Title III Classifications Sections 311,312:

- Acute: **YES**
- Chronic: **YES**
- Fire: **YES**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

16. OTHER INFORMATION

Follow all MSDS/label precautions even after container is emptied because it may retain product residue. Keep out of reach of children. For use as motor fuel only. Do not use for any other purpose.

REFERENCES (Section 11 and 12):

API (1977) Mutagenicity evaluation of unleaded gasoline. Study conducted by Litton Bionetics. API Med. Res. Publ. 28-30173. Washington DC: American Petroleum Institute

API (1983) Carcinogenic potential of key petroleum products. Study conducted by Eppley Institute for Research in Cancer, University of Nebraska Medical School. API Med. Res. Publ. 30-31646. Washington DC: American Petroleum Institute

API (1995) Primary skin irritation study in rabbits of API 91-01 and PS-6. Unleaded test gasolines. Study conducted by Hill Top Biolabs Inc. API Toxicology Report No. 409. Washington DC: American Petroleum Institute

API (2005) Baseline gasoline vapor condensate: a 13-week whole-body inhalation toxicity study in rats with neurotoxicity assessments and 4-week *in vivo* genotoxicity and immunotoxicity assessments. Study conducted by Huntingdon Life Sciences. Study No. 00-6125. Washington DC: American Petroleum Institute

ARCO (1986a) Acute dermal toxicity study in rabbits administered test article F-64-01 unleaded premium gasoline. UBTL Study No. 60553. Los Angeles CA: ARCO

ARCO (1986b) Acute oral toxicity study in rats administered test article F-64-01 unleaded premium gasoline. UBTL Study No. 60598. Los Angeles CA: ARCO

ARCO (1986c) Dermal sensitization study in guinea pigs administered test article F-64-01 unleaded premium gasoline. UBTL Study No. 60613. Los Angeles CA: ARCO

ARCO (1986d) Primary eye irritation study in rabbits administered test article F-64-01 unleaded Watson premium gasoline. UBTL Study No. 60583. Los Angeles CA: ARCO

ARCO (1986e) Twenty-eight (28) day dermal toxicity study in rats on test article F-64-01 unleaded Watson premium gasoline. UBTL Study No. 60761. Los Angeles CA: ARCO

ARCO (1992) Acute inhalation toxicity study (limit test) in rats administered test article F-101. UBTL Study No. 65798. Los Angeles CA: ARCO

CONCAWE (1996) Acute aquatic toxicity of gasolines. Report No. 96/57. Brussels: CONCAWE

Davis, A. et al (1960) The effects on human volunteers of exposure to air containing gasoline vapor. *Arch Environ Health* 1, 548-554

Drinker, P. et al (1943) The threshold toxicity of gasoline vapor. *J Ind Hyg Toxicol* 25, 6, 225-232

EBSI (1995a) Alga, growth inhibition test. MRD-95-048 gasoline W94/813, blend. Study performed for CONCAWE. EBSI Study No. 104867. East Millstone NJ: Exxon Biomedical Sciences Inc.

EBSI (1995b) Daphnia, acute toxicity test. MRD-95-044 gasoline W94/809, medium naphtha. Study performed for CONCAWE. EBSI Study No. 104442. East Millstone NJ: Exxon Biomedical Sciences Inc.

EBSI (1995c) Fish, acute toxicity test - rainbow trout. MRD-95-045 gasoline W94/810, isomerate. Study performed for CONCAWE. EBSI Study No. 104558. East Millstone NJ: Exxon Biomedical Sciences Inc.

Halder, C.A. et al (1985) Hydrocarbon nephropathy in male rats: identification of the nephrotoxic components of unleaded gasoline. *Toxicol Ind Health* 1, 3, 67-87

McKee, R.H. et al (2000) Assessment in rats of the reproductive toxicity of gasoline from a gasoline vapor recovery unit. *Reprod Toxicol* 14, 4, 337-353

Petroleum Product Stewardship Council (1995) Static-renewal 96-hour acute toxicity study of the water accommodated fraction (WAF) of whole light alkylate product to fathead minnow. Study conducted by Stonybrook Laboratories Inc. Study No. 65908. Washington DC: Petroleum Product Stewardship Council

Roberts, L. et al (2001) Developmental toxicity evaluation of unleaded gasoline vapor in the rat. *Reprod Toxicol* 15, 5, 487-494

Short, B.G. et al (1989) Promoting effects of unleaded gasoline and 2,2,4-trimethylpentane on the development of atypical cell foci and renal tubular cell tumors in rats exposed to *N*-ethyl-*N*-hydroxy-ethylnitrosamine. *Cancer Research* 49, 22, 6369-6378

Springborn Laboratories (1999) Light alkylate naphtha - full life cycle toxicity test with water fleas, *Daphnia magna*, under static-renewal conditions following OECD Guideline 211. Study No. 13687.0598.6105.130. Wareham MA: Springborn Laboratories Inc.