SINCLAIR
MATERIAL SAFETY DATA SHEET
SINCLAIR GASOLINE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME	Gasoline
APPLICATIONS:	Automotive Gasoline
SYNONYMS:	Regular, Premium, Subgrade, Motor Fuel, Gasohol
CAS REGISTRY NUMBER:	8006-61-9
Chemical Family:	Liquid Hydrocarbon
EMERGENCY TELEPHONE:	CHEMTREC - (800) 424-9300 or (703) 527-3887 (collect)
SUPPLIER:	Sinclair Oil Corporation P. O. Box 30825 Salt Lake City, Utah 84130
TELEPHONE:	(888) 340-3466
FAX:	(801) 524-2740

2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME: Liquid Hydrocarbon

COMPOSITION COMMENTS:

	Typical wt. %	CAS Registry #
REGULAR UNLEADED		
Gasoline, Including:	100.0	8006-.61-9
Cyclohexane	0.5	110-82-7
Benzene	3.0	71-43-2
Toluene	10.0	108-88-3
Xylene	6.5	1330-20-7
Trimethyl Benzene	7.0	25551-13-7
Naphthalene	0.2	91-20-3
Ethyl Alcohol	10.0	64-17-5
PREMIUM UNLEADED		
Gasoline, Including:	100.0	8006-61-9
Cyclohexane	0.2	110-82-7
Benzene	4.0	71-43-2
Toluene	13.7	108-88-3
Xylene	12.7	1330-20-7
Trimethyl Benzene	11.9	25551-13-7
Naphthalene	0.3	91-20-3
Ethyl Alcohol	10.0	64-17-5

Gasoline consists of a complex blend of paraffinic, olefinic, naphthenic, and aromatic hydrocarbons which may contain up to 5% benzene an dosages of multi-functional additives. May contain 0 – 10% Ethanol.

3. HAZARDS IDENTIFICATION

EXPOSURE GUIDELINE:

COMPONENTS	TWA	STEL	CEILING	TLV	STEL	UNIT
Gasoline	None Established			300	500	ppm
Benzene	10*					ppm
Cyclohexane	300			300	--	ppm
Naphthalene	10			10	15	ppm
Toluene	200		300	50	--	ppm
Xylene	100			100	150	ppm
Trimethyl Benzene	--			25	--	ppm
Ethyl Alcohol	1000			1000	--	ppm

* Applies to industry segments exempt from the 1 ppm 8 hour TWA and 5 ppm STEL of the Benzene Standard at 29CFR1910.1028.

EMERGENCY OVERVIEW:
Clear, bronze, red, yellow, or purple color with strong hydrocarbon odor. Irritating to eyes, skin and respiratory tract.

POTENTIAL HEALTH EFFECTS:
Trauma and burns secondary to explosions and fires can result. In enclosed spaces, oxygen may be displaced by vapors or consumed by combustion. Incomplete combustion will produce carbon monoxide and other toxic gases.

INHALATION:
High vapor concentrations are possible and can be hazardous on single exposure. Overexposure may cause weakness, headache, nausea, confusion, blurred vision, drowsiness and other central nervous system effects. Extremely high-level exposure may result in dizziness, irregular heartbeat, coma, collapse and death.

EYE CONTACT:
May cause eye irritation.

SKIN CONTACT:
Contact may irritate or burn skin. Repeated contact may cause skin to become dry & scaly.

INGESTION:
If aspirated (liquid enters lung) following ingestion, severe lung irritation and pulmonary edema (swelling of lung tissue) may occur. Aspiration may also result in central nervous system depression or excitement. Serious, permanent lung damage may result. Nausea, vomiting, diarrhea, or abdominal pain may occur following ingestion.

4. FIRST AID MEASURES

INHALATION:
Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance. If breathing stops, use mouth-to-mouth resuscitation.

EYE CONTACT:
Flush immediately with water for at least 15 minutes. Seek medical attention promptly.

SKIN CONTACT:
Discard contaminated leather articles. Wash contact areas with soap and water. Launder contaminated clothing before reuse.

INGESTION:
DO NOT INDUCE VOMITING. Get medical assistance promptly. (Note to Physician: Material, if aspirated into lungs, may cause chemical pneumonitis. Treat appropriately.)

5. FIRE FIGHTING MEASURES

FLASH POINT (°F): -45^{o} F
FLAMMABLE LIMITS: LEL – 1.4% UEL – 7.6%
AUTOIGNITION TEMPERATURE: 700^{o} F+
GENERAL HAZARD:
Incomplete burning can produce carbon monoxide. This is an extremely flammable liquid; vapor accumulation could flash and/or explode if it comes into contact with open flame.

FIRE FIGHTING INSTRUCTIONS:
Use CO_2, foam, dry chemical, Halon, or water fog. Keep personnel removed from and up-wind of fire. Cool adjacent structures and storage drums with water spray. Evacuate area. Prevent runoff from fire control dilution from entering streams or drinking water supply

FIRE FIGHTING EQUIPMENT:
Fire fighters should use SCBA and full protective equipment (Bunker gear).

HAZARDOUS COMBUSTION PRODUCTS:
May produce carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL:
Treat spill as an oil spill. Eliminate all sources of ignition. Remove leaking containers to a safe area. Contain and remove by mechanical means. Guard against contamination of water supplies. Report spills to appropriate authorities. Dispose of in accordance with Federal, State, and Local regulations.

WATER SPILL:
Treat spill as an oil spill. Report spills to appropriate authorities. Dispose of in accordance with Federal, State, and Local regulations.

7. HANDLING AND STORAGE

GENERAL:

Ground and bond all transfer and storage equipment. Drums must be grounded / bonded / equipped with self-closing valves, pressure vacuum bungs and flame arrestors. Store away from ignition sources in a cool area. Outside or detached storage is preferred. Containers should be labeled: **FLAMMABLE. VAPOR HARMFUL**

When handling, use non-sparking tools and equipment. Do not use as a cleaner or solvent. Use only as motor fuel. **DO NOT SIPHON BY MOUTH.**

8. ENGINEERING CONTROLS, RESPIRATORY & PERSONAL PROTECTION

IF CONTACT IS LIKELY, THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT IS RECOMMENDED:

ENGINEERING CONTROLS:
Assure adequate natural or mechanical ventilation. Eliminate all sources of ignition.

PERSONAL PROTECTION:

RESPIRATOR:
Approved respiratory protection must be used when vapors or mist concentrations are unknown or exceed the TLV. Avoid prolonged or repeated breathing of vapor or mists.

PROTECTIVE CLOTHING:
Use full-face shield, chemical goggles, impervious gloves, boots, and whole-body protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE/PHYSICAL STATE:	Liquid
COLOR:	Clear/bronze/red/yellow/purple
DENSITY/SPECIFIC GRAVITY (g/ml):	0.65 – 0.75
VAPOR DENSITY (air=1):	>1
VAPOR PRESSURE:	7-15 PSIA
BOILING POINT/RANGE:	230^{o} F
SOLUBILITY IN WATER:	Negligible
VISCOSITY:	N/A/F
pH:	N/A
FREEZING POINT:	-76^{o} F

10. STABILITY AND REACTIVITY

GENERAL:

This product is stable.

IMCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Avoid Halogens, strong acids, alkalies, and oxidizers. Also keep away from heat, sparks, flame and static electricity.

HAZARDOUS DECOMPOSITION:

Incomplete burning can produce carbon monoxide.

11. TOXICOLOGICAL INFORMATION

SYSTEMIC:

Petroleum-derived fuels and fuel oils are complex and variable mixtures of hydrocarbons. In general, the more viscous the mixture, the less toxic it will be. At high-level exposures, humans experience multiple organ failures, some of which may be due to hypoxia and secondary to the failure of other organ systems. In humans, kidney failure has been noted only at high, acute levels of exposures and appears reversible. Liver enzymes may be transiently elevated. At lower level exposures, most acute health effects are reversible. People can be exposed by inhalation, ingestion and dermal contact. Frequently, people are exposed by combined and inhalation exposure.

ACUTE:

Inhalation: Headaches, confusion, disorientation, blurred vision occur with inhalation. Higher exposures may cause hallucinations, CNS excitation, drowsiness, CNS depression. Seizure and coma occur from very high exposures and death may result from respiratory depression. ECG changes, cardiac arrhythmias, tachycardia, shock and cardiovascular collapse can occur. Pneumonia, pulmonary edema and hemorrhages can occur.

Ingestion: Central nervous system, cardiovascular, and respiratory effects have been reported with acute exposures to various hydrocarbon fuels and oils similar to those reported with inhalation. Nausea, vomiting, cramping and diarrhea may occur.

Eye: Eye irritation to atomized gasoline has been noted at 200, 500 and 1000 mg/m^3 for 30 minutes and after an 8-hour exposure to 140 ppm. Atomized gasoline has the same composition as liquefied gasoline while gasoline vapors are different. Conjunctivitis has been reported after 1 hour of exposure to 900 ppm.

Skin: Mild erythema to full thickness chemical burns have occurred after prolonged exposure to arious hydrocarbon fuels and oils.

CHRONIC:

Chronic exposure results in kidney damage in male rats. However, this damage appears to be related to a protein produced in large amounts in male rats, but not in humans or female rats. Occupational exposures in petroleum refining are considered Group 2A (probably carcinogenic) by IARC.

Liver and kidney tumors have been noted in animals. Data is less clear in humans because of confounding factors in epidemiological studies. Some components (e.g. benzene) are known carcinogens.

Contains benzene, which can be toxic to the blood and blood-forming organs. Contains benzene, which is suspected to cause cancer in humans.

12. DISPOSAL INFORMATION

RCRA:

Disposal of this product or material contaminated with this product may be regulated by RCRA due to the characteristic of ignitability or due to the toxicity characteristic of benzene (D018).

EPA Hazard Class: Acute Hazard/Chronic Hazard/Fire Hazard

Dispose of in accordance with Federal, State, and Local regulations.

13. TRANSPORT INFORMATION

DOT (Department of Transportation):

PROPER SHIPPING NAME:	Gasoline	
HAZARD CLASS:	3	
IDENTIFICATION NUMBER:	UN 1203	PG II
NAERG96 NUMBER:	128	

14. REGULATORY INFORMATION

CERCLA (Comprehensive Environmental Response Compensation and Liability Act): The following components are hazardous substances in CERCLA and therefore are subject to emergency notification requirements:

Benzene
Cyclohexane
Naphthalene
Toluene
Xylene

SARA TITLE III (Superfund Amendments and Reauthorization Act): The following components are subject to SARA Title III, Sections 311 and 312, which require MSDS reporting and hazardous chemical inventory reporting:

Benzene
Cyclohexane
Ethyl Alcohol
Naphthalene
Toluene
Trimethyl Benzene
Xylene

The following components are subject to SARA Title III, Section 313, which requires chemical release reporting:

Benzene
Cyclohexane
Methy-tert-butyl ether
Naphthalene
Toluene
Trimethyl Benzene
Xylene

14. REGULATORY INFORMATION CONTINUED

The following components are subject to OSHA 29CFR1910.1200 Hazard Communication Standard:

Benzene* 1
Cyclohexane 2
Ethyl Alcohol 2
Naphthalene 2
Toluene 2
Trimethyl Benzene 2
Xylene 2

(1)* Benzene has been identified by NIOSH, IARC, NTP as a human carcinogen. Refer to 29CFR1910.1000 Table Z-2 and 29CFR1910.1028 for information.

(2) Consult MSDS or NIOSH Occupational Guidelines for more information.

15. OTHER INFORMATION

NFPA 704/HMIS:

Health – 1 Flammability – 3 Reactivity – 0
(0 = insignificant, 1 = slight, 2 = moderate, 3 = high, 4 = extreme)

REVISION SUMMARY:
Complete review of MSDS, December 2002.

DISCLAIMER

THIS PRODUCT MATERIAL SAFETY DATA SHEET PROVIDES HEALTH AND SAFETY INFORMATION. THE PRODUCT SHOULD BE USED IN APPLICATIONS CONSISTENT WITH THIS PRODUCT LITERATURE. FOR ANY OTHER USES, EXPOSURES SHOULD BE EVALUATED SO THAT APPROPRIATE HADLING PRACTICES AND TRAINING PROGRAMS CAN BE ESTABLISHED TO ENSURE SAFE WORKPLACE OPERATIONS.

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DATE: **July 2004**

SUPERSEDES: **April, 2003**