APEX OIL COMPANY, INC.
CLARK OIL TRADING COMPANY
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24 Hour Emergency Phone Number: General Assistance 1-314-889-9600
Chemtrec: 1-800-424-9300

MATERIAL SAFETY DATA SHEET

Unleaded Gasoline (NO Ethanol)

Section I. Product and Company Identification

Common Trade Name:	Unleaded Gasoline
Synonyms:	No Lead, 87 Reformulated, 89 Reformulated, 93 Reformulated, Regular, Mid-Grade, Premium
Material Use or Occurrence:	Automotive Fuel, Motor Fuel

Section II. Composition/Information on Ingredients

Chemical Family:	Aliphatic and aromatic hydrocarbons/variable (C5-C9). See also Section III, Hazardous Ingredients.
Chemical Ingredients:	A complex mixture of aliphatic parafins, olefins, napthalenes, and aromatic hydrocarbons. May contain small amounts (less than 3%) of benzene. See Section III, Hazardous Ingredients, for details.
Reportable Quantity:	See Section XV, Regulatory Information.
Marine Pollutant:	Yes.

Section III. Hazards Identification

HMIS:		Hazardous Ingredients		
3	Fire	Name	CAS No.	% By Weight
2	Health			
2	Reactivity			
	Specific Hazards			
4 = Extreme 3 = High 2 = Slight 1 = Least		**Unleaded Gasoline:** A complex mixture of aliphatic parafins, olefins, napthalenes, and aromatic hydrocarbons. May contain small amounts (less than 3%) of benzene. **Benzene:** **Ethylbenzene:** **Toluene:** **Xylene, all isomers:** **Hexane, other isomers:** **MTBE (possible, except where banned)** **May contain minute tracer product:** **Butane**	8006-61-9 71-43-2 100-41-4 108-88-3 1330-20-7 Mixture Mixture 	100% <3% 0.2 – 4% 1 – 20% 1 – 18% 5 – 15% Trace ≤ 1% ≤ 4%

Summary of Hazards

Danger! Extremely flammable liquid and vapor! Vapor may cause flash fire. Hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. May be ignited by heat, sparks or flame. Vapors may travel to a source of ignition and flash back. Vapor explosion hazard indoors, outdoors or in sewers.

Vapor is harmful and causes severe skin and eye irritation. Toxic and harmful if inhaled or ingested. Addiction to vapors has been reported. Acute exposure to mist/vapor may cause respiratory tract irritation, central nervous system depression, aspiration pneumonitis. May be harmful or fatal if swallowed; may cause irritation, central nervous system depression, coma or death. Direct contact with skin may cause extreme irritation with severe erythems and edema with blistering and open sores. Absorption of large amounts may cause narcosis. High concentrations may cause bone marrow hypoplasia. Chronic exposure could result in renal failure and/or degenerative changes of liver, kidneys, pancreas or spleen. Long- term exposure of vapor has caused cancer in laboratory animals. Keep out of reach of children. Toxic to marine life.

Signs and symptoms of overexposure include giddiness, headache, dizziness, nausea, vomiting, incoordination, narcosis, stupor, coma, unconsciousness, weight loss, anemia, weakness nervousness, renal failure pains in limbs, peripheral numbness, paresthesias, drying and cracking of skin, rashes or spots on skin.

DANGER! Isolate from sources of ignition. See also Section XI, Toxicological Information.

Section IV. First Aid Measures

Eye Contact:	Flush eyes with copious amounts of water while occasionally lifting eyelids open until no sign of chemical remains (15-20 minutes). Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling occur, transport to nearest medical facility for additional treatment.
Skin Contact:	Remove contaminated clothing. Flush with large amounts of water for at least 15 minutes and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.
Slight Inhalation:	Remove to fresh air. Maintain airway and blood pressure and administer oxygen (by qualified personnel). If not breathing, apply artificial respiration or cardiopulmonary resuscitation. Keep person warm, quiet and get medical attention immediately.
Slight Ingestion:	Never give anything by mouth to an unconscious person. DO NOT induce vomiting. Aspiration of material into the lungs due to vomiting can cause chemical pneumonitis, which can be fatal. If vomiting occurs, keep subject's head lower than hips to prevent pulmonary aspiration. If more than 1 mg/kg of petroleum distillates are swallowed, remove by gastric lavage by a qualified person. After vomiting stops, give 30-60 ml of fleet's phospho-soda diluted 1:4 in water. SEEK IMMEDIATE MEDICAL ATTENTION. Keep person warm and quiet.
Notes to Physician:	Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Vigorous anti-inflammatory or steroid treatment may be required at first evidence of upper airway or pulmonary edema. Administer 100 percent humidified supplemental oxygen with assisted ventilation, as required. If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Accordingly, induction of emesis is not recommended. Consider administration of an aqueous slurry of activated charcoal followed by a cathartic such as magnesium citrate or sorbitol. Also, treatment may involve careful gastric lavage if performed soon after ingestion or in patients who are comatose or at risk of convulsing. Protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position. Obtain chest X-ray and liver function tests. Monitor for cardiac function, respiratory distress and arterial blood gases in severe exposure cases. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of this material (e.g., in enclosed spaces or with deliberate abuse). If used, monitor heart action closely. Consider use of other drugs with less arrhythmogenic potential.

Section V. Fire Fighting Measures

This Product Is:	A high fire hazard.	**NFPA:** **4 = Extreme** **3 = High** **2 = Slight** **1 = Least**	**Flammability**  **Health** **Reactivity** **Specific Hazards**
Flash Points:	-45°F (-43° C) (Tag. Closed Cup)		
Flammable Limits:	LOWER: 1.4% -- UPPER: 7.6%		
Auto-Ignition Temperature:	(Text) 257° C		
Flammability:	CAUTION! HIGHLY FLAMMABLE! OSHA Class 1B Flammable Liquid		
Basic Firefighting Procedures:	Material will float and can be re-ignited on surface of water. Foam, carbon dioxide (CO_2), dry chemical, “alcohol foam” for flame; for larger fires use water spray, fog or foam.		
Fire Degradation Products:	Carbon monoxides, oxides of nitrogen, hydrocarbons. Incomplete combustion will produce carbon monoxide.		
Unusual Fire and Explosion Hazards:	Do not mix or store with strong oxidants. Do not store or pour near sources of ignition. Do not pressurize, cut, heat, weld or expose empty containers to sources of ignition, heat or flame. Hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. May be ignited by heat, sparks or flame. Vapor explosion hazard indoors, outdoors or in sewers. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Prevent vapor accumulation. Vapors form flammable or explosive mixtures with air at room temperature. Vapors may accumulate in low areas. Vapors may concentrate in confined areas. Cool exposed containers with water spray. Continue water spray until entire container contents are cool. Withdraw immediately in case of rising sound from venting safety device or and discoloration of storage tank due to fire (subject to fire chief’s directions). Flowing product can be ignited by self-generated static electricity. Use adequate bonding and grounding to prevent static buildup. Runoff to sewer may cause fire or explosion hazard. Containers may explode in heat of fire. Irritating or toxic substances may be emitted upon thermal decomposition. For fires involving this material, do not enter any enclosed or confined space without proper protective equipment, which may include NIOSH approved self-contained breathing apparatus with full facemask. Clothing, rags or similar organic material contaminated with this product and stored in a closed space may undergo spontaneous combustion. Transfer to and from commonly bonded and grounded containers.		

Section VI. Accidental Release Measures

Spill and Leak Procedures:	CAUTION! COMBUSTIBLE. Eliminate potential sources of ignition. Handling equipment must be bonded and grounded to prevent sparking. Stay upwind and away from spill. Wear appropriate personal protective equipment when cleaning up spills. Refer to Section VIII. Shut off source of leak if safe to do so. Isolate hazard area and restrict entry. If properly trained, proceed with the following measures. FOR SMALL SPILLS: Soak up residue with an absorbent such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal in accordance with environmental regulations. FOR LARGE SPILLS: Dike and contain spill in smallest possible area. Recover as much product as possible with vacuum truck or pump to storage/salvage vessels. Reporting: Contact fire authorities and appropriate federal, state and local agencies. U.S. regulations require reporting releases of this material to the environment, which exceed the reportable quantity to the National Response Center at 800-424-8802. CWA: This product is an oil as defined under Section 311 of EPA's Clean Water Act (CWA). If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 800-424-8802. For highway or railway spills, contact Chemtrec at 800-424-9300. See also Section XVI.

Section VII. Handling and Storage

Precautionary Measures:	CAUTION! HIGHLY FLAMMABLE! ISOLATE FROM SOURCES OF IGNITION. Store and transport in accordance with all applicable laws. Keep containers tightly closed. Store in a cool, dry, well-ventilated place. Clearly label all containers. Keep containers closed. Use only with adequate ventilation. May be ignited by heat, sparks or flame. Avoid heat, open flames, including pilot lights, and strong oxidizing agents. Hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. Use explosion-proof ventilation to prevent vapor accumulation. Vapors may travel to a source of ignition and flash back. Vapor explosion hazard indoors, outdoors or in sewers. Ground all handling equipment to prevent sparking.
Handling:	Surfaces that are sufficiently hot may ignite liquid material. Do not breathe material. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.
Storage:	Keep liquid and vapor away from heat, sparks and flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors have dissipated. Use explosion-proof ventilation indoors and in laboratory settings. Keep containers closed when not in use. Containers, even those that have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Section VIII. Exposure Controls/Personal Protection

Respiratory Protection:	If workplace exposure limits for product or components are exceeded, NIOSH equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors; however, mask with organic vapor cartridge is recommended. Use positive pressured air-supplied or SCBA in the event of a large spill. This equipment should be available for nonroutine and emergency use. Refer to OSHA Respiratory Protection Standard, 29 CFR 1910.134.
Eye Protection:	Keep away from eyes. Eye contact can be avoided by wearing safety glasses with sideshields or chemical splash goggles. A source of clean water should be available in the work area for flushing eyes.
Skin Protection:	Keep away from skin. Skin contact can be minimized by wearing protective gloves such as neoprene, pvc, nitrile-butadiene rubber, etc. and, where necessary, impervious clothing and boots. Where potential exists for exposure to a product and water mixture (e.g., hydroblasting exchanger tubes or vessel bottoms), a face shield as well as appropriate barrier creams should be used to prevent face and neck contact. Leather goods contaminated with this product should be discarded. A source of clean water should be available in the work area for flushing skin.
Ventilation:	Avoid breathing mists and vapor. Use in well ventilated area. Local exhaust recommended where airborne concentrations exceed 300 ppm. In confined space, mechanical ventilation may be necessary to reduce vapor concentrations to levels below the allowable exposure limits. Indoors, use lab hood. Outdoors, work upwind.
Confined Space Precautions:	Tanks, vessels, or other confined spaces which contain product should be freed of vapors before entering. Because vapors can accumulate in tanks, vessels, and bulk transport compartments, personnel should stand upwind, keep their faces at least two feet from compartment openings, and avoid breathing vapors when opening hatches and dome covers. The container should be meter checked meter to ensure a safe atmosphere before entry. Empty containers may contain toxic, flammable, combustible or explosive residues or vapors. Do not cut, grind, drill, weld, or reuse empty containers that contained this product. Do not transfer this product to another container unless the container receiving the product is labeled with proper DOT shipping name, hazard class and other information that describes the product and its hazards.

See also Section XI, Toxicological Information.

Section IX. Physical and Chemical Properties

Boiling point:	75 to 437°F (24-225° C)	**Odor Threshold:**	.02 ppm (“rotten egg”)
Melting or Solid Point:	Not applicable	**Specific Gravity:**	0.7022-0.7587 (typical)
Vapor Density:	3.0-4.4 (Air=1)	**Vapor Pressure:**	6.5-15 @ 100° F (38° C)
Solubility:	Insoluble	**Volatility:**	98-100% by volume.
Evaporation rate:	10-11 (n-butyl acetate =1)	**Physical State and Appearance:**	Characteristic gasoline odor. Slightly viscous liquid. Clear to amber color.

See also Section III, Hazardous Ingredients.

Section X. Stability and Reactivity

Stability:	The product is stable under normal pressures and temperatures.
Incompatibility:	May explode or react violently when exposed to oxidizing materials.
Hazardous Polymerization:	Hazardous polymerization has not been known to occur under normal temperatures and pressures.
Typical Decomposition Products:	Thermal decomposition may release various hydrocarbons and hydrocarbon derivatives including carbon dioxide, water, organic acids, and aldehydes.

Section XI. Toxicological Information

Primary Routes of Entry:	Eye or skin contact, ingestion, inhalation.	
Target Organs:	Prolonged and repeated exposure to high concentrations of benzene (10s to 100s ppm) has been linked to serious injury to blood-forming organs, including liver and bone marrow, and may cause anemia and acute myelogenous anemia, and damage to kidneys, reproductive systems, mucous membranes, central nervous system, peripheral nervous system, eyes, cardiovascular system, including heart, and respiratory system.	
Carcinogenic Effects:	This product may contain benzene at concentrations above 0.1%. NTP, IARC, ACGIH, and OSHA identified benzene as a carcinogen. IARC identified residual oils (light catalytic cracked distillate) as a possible (2B) carcinogen.	
Exposure Limits:	**Gasoline:**	ACGIH TLV: 300 (ppm) STEL: 500 (ppm)
	Benzene:	TWA: 1 (ppm) ST:5 (ppm) OSHA from NIOSH (2003) TWA: 0.5 (ppm) CEIL: 2.5 (ppm) from ACGIH [2009] SKIN TWA: 0.1 (ppm) ST: 1 (ppm) from NIOSH-REL [2003] SKIN IDLH: 500 (ppm) from NIOSH [2003]
	Ethylbenzene:	ACGIH TLV TWA: (100) ppm STEL: 125 ppm (2009)
	Hexane Isomers:	TWA: 500 (ppm) STEL: 1000 (ppm) from ACGIH (TLV) (2009)
	Xylene Isomers:	TWA: 100 (ppm) STEL: 150 (ppm) from ACGIH (TLV) (2009) TWA: 100 (ppm) from OSHA (PEL)
	Toluene :	TWA: 20 (ppm) from ACGIH (TLV) (2009) TWA: 200 (ppm) CEIL: 300 (ppm) 500* (ppm) from OSHA (PEL) (*10-min peak per 8 hour shift)
	MTBE:	TWA: 50 (ppm) from ACGIH (TLV) (2009)
Effects and Hazards of Eye Contact:	May cause irritation of the eyes, manifested by temporary burning sensation, tearing, redness, swelling, and/or blurred vision.	
Effects and Hazards of Skin Contact:	Severely irritating to the skin. Direct contact with skin may severe erythems and edema with blistering and open sores. Absorption of large amounts may cause narcosis. Repeated or prolonged exposure also may cause defatting of the skin with drying and cracking or burns and blistering. Hypersensitivity may develop.	
Effects and Hazards of Inhalation:	Acute exposure to mist/vapor may cause respiratory tract irritation, central nervous system depression, aspiration or chemical pneumonitis. Other central nervous system effects including excitation, euphoria, contracted eye pupils, dizziness, drowsiness, blurred vision, fatigue, nausea, headache, loss of reflexes, tremors, convulsions, seizures, loss of consciousness, coma, respiratory arrest and sudden death could occur as a result of long term and/or high concentration exposure to vapors. May also cause anemia and irregular heart rhythm. Addiction to vapors has been reported.	
Effects and Hazards of Ingestion:	This product may be harmful or fatal if swallowed. This product may cause nausea, vomiting, diarrhea and restlessness. DO NOT INDUCE VOMITING. Aspiration into the lungs can cause severe chemical pneumonitis or pulmonary edema/hemorrhage, which can cause unconsciousness, or be fatal. May cause gastrointestinal disturbances. Symptoms may include irritation, depression, vomiting and diarrhea. Severe intoxication may result in coma and convulsions. May cause other harmful central nervous system effects, similar to those listed under "inhalation".	
Medical Conditions Aggravated by Exposure:	Preexisting eye, skin, heart, central nervous system, kidney, liver and respiratory disorders may be aggravated by exposure to this product. Skin contact may aggravate existing dermatitis.	

Toxicological Information, Continued.

Toxicological Information:	**GASOLINE** contains polycyclic aromatic hydrocarbons, which are potentially carcinogenic. Skin painting studies in laboratory animals with petroleum residua have produced severe irritation and systemic toxicity, including cancers. The residuum contains polycyclic aromatic compounds which have been shown to cause anemia, disorders of the liver, bone marrow and lymphoid tissues in rats following dermal application. **BENZENE** may cause serious injury to blood-forming organs and is linked to the later development of acute myelogenous leukemia. Prolonged and repeated exposure to high concentrations of benzene (10s to 100s ppm) has been linked to serious injury to blood-forming organs, including liver and bone marrow, and may cause anemia and acute myelogenous anemia, and damage to kidneys, reproductive systems, mucous membranes, central nervous system, peripheral nervous system, eyes, cardiovascular system, including heart, and respiratory system.
Toxicity to Animals:	D50: 18,800 mg/kg (rat). **Remark:** A study sponsored by API reported an increase in hepatocelluar adenomas and carcinomas in male rats and female mice. Related materials have caused the development of skin tumors in lifetime mouse skin painting.

Section XII. Ecological Information

Protection of Stratospheric Ozone:	Pursuant to section 611 of the Clean Air Act Amendments of 1990 and per 40 CFR Part 82, this product does not contain nor was it directly manufactured with any class I or II ozone depleting substances.
Impact on Marine Ecosystems:	Gasoline contains components that are potentially toxic to freshwater and saltwater ecosystems. It will normally float on water. The lighter components of gasoline will evaporate rapidly. In stagnant or slow-flowing waterways, a hydrocarbon layer can cover a large surface area. As a result, this covering layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway might be enough to cause a fish kill or create an anaerobic environment. This coating action can also be harmful or fatal to plankton, algae, aquatic life, and water birds.

Section XIII. Disposal Considerations

Waste Disposal:	Secure in chemical landfill. Dispose of material in accordance with local, county, state and federal regulations. Under EPA RCRA (40 CFR 261.21), if this product becomes a waste material intended for disposal and has a flash point below 140° F, it would be ignitable hazardous waste (waste code number D001). Contact state and federal regulators for confirmation of hazardous/industrial waste classification, and handle accordingly. Use licensed transporter and disposal facility. In addition, conditions of use may cause this material to become a hazardous waste, as defined by Federal or State regulations. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR Parts 260 through 271). State and/or local regulations might be even more restrictive. Contact the RCRA/Superfund Hotline at (800) 424-9346 or your regional US EPA office for guidance concerning case specific disposal issues.

Section XIV. Transport Information

Danger! Extremely flammable liquid and vapor! Vapor may cause flash fire. Hazardous vapors may evolve and collect in the headspace of storage tanks or other enclosed vessels. May be ignited by heat, sparks or flame. Vapors may travel to a source of ignition and flash back. Vapor explosion hazard indoors, outdoors or in sewers.

DOT:  DOT CLASS 3: Flammable Liquid.	Hazardous Substance/Material RQ: Benzene/10 lbs.	
DOT Shipping Name:	Gasoline	
DOT ID #/Packaging Group:	UN1203	PG (packaging group): II.

Section XV. Regulatory Information

SARA Title III (302, 304, 311, 312):	Section 302/304	Extremely Hazardous Substances					
		Hydrogen Sulfide: RQ = 100 lbs.					
	Section 311 Hazard Category	Immediate Health	Delayed Health	Fire	Pressure	Reactivity	
		X	X	X			
SARA Title III (313):	Benzene.						
EPA/TSCA:	On the TSCA inventory list.						
Other Chemical Inventories:	Canadian DSL, Australian AICS, European EINECS.						
California Prop. 65:	This product contains benzene, which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute.						
State Right-to-know Regulations:	**Chemical Name:** Benzene.	New Jersey Right-To-Know label.					
	Other health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.						
CERCLA/SUPERFUND Reportable Quantities:	Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal or greater than the reportable quantities (RQs) in 40 CFR 302.4. (Benzene RQ => 10 pounds or 4.54 Kg or 1 gallon.)						
OSHA Hazard Determination:	This material is hazardous as defined by OSHA's Hazard Communication Standard, 29 CFR 1910.1200.						

Section XVI. Other Information

Information contained herein was based on data and compiled from reference materials and other sources believed to be reliable and is offered in good faith. However, the MSDS's accuracy or completeness is not guaranteed by Apex, nor is any responsibility assumed or implied for any loss or damage resulting from inaccuracies or omissions. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

Modifications:

November, 2010: Added Butane <4% to list of Hazardous Ingredients.

March, 2011: Revised layout of HMIS and NFPA information.
Updated TLVs
Removed additive and tracer brand-names.
Added range of vapor pressures for seasonal product.

February, 2012: Added "(NO Ethanol)" to title.

May, 2013: Replaced the word "Ethanol" with "Additive" in footer.
Removed the words "with 10% Ethanol" from DOT Shipping Name, Section XIV
Removed all references to additive, even where reference applied to tracers.
Replaced text with ≤ sign.