



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

El Paso Corporation
and its subsidiaries
1001 Louisiana Street
Houston, Texas 77002

Information: (713) 420-2600
CHEMTREC: (800) 424-9300

Product Name: Natural Gasoline
MSDS Number: A0048.msds

Last Revision: 11/17/2011
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Synonyms: Casing Head Gasoline, Gasoline
Product Description: A complex combination of hydrocarbons separated from natural gas by process such as refrigeration or absorption. Primarily saturated aliphatic hydrocarbons having carbons within the range of C4 through C8.

2. COMPOSITION & INFORMATION ON INGREDIENTS

Product/ Components	CAS No.	Wt% ⁽¹⁾	Occupational Exposure Limits			Units
			OSHA ⁽²⁾	ACGIH ⁽²⁾	NIOSH ⁽³⁾	
Natural Gasoline	8006-61-9	100	N/A	300 500 ^{STEL}	N/A	ppm
Isoparaffins	N/A	75-95	N/A	N/A	N/A	N/A
n-Hexane	110-54-3	2-13	500	50	50	ppm
n-Butane	106-97-8	2-5	800 ⁽⁵⁾	1000 ⁽⁶⁾	800	ppm
Cyclohexane	110-82-7	1-5	300	300	300	ppm
Benzene	71-43-2	0-2	1 5 ^{STEL}	0.5 ⁽⁴⁾ 2.5 ^{STEL}	0.1 1 ^{STEL}	ppm

⁽¹⁾Normal composition ranges are shown. Exceptions may occur depending upon the source of the gasoline. Isoparaffins are the principal component.

⁽²⁾8-hour TWA unless otherwise specified.

⁽³⁾10-hour TWA unless otherwise specified.

⁽⁴⁾ ACGIH has established a Biological Exposure Index (BEI) for this substance due to its carcinogenicity.

⁽⁵⁾Vacated 1989 PEL. The manufacturer has included this data for informational purposes since these values were vacated in 1992.

⁽⁶⁾ Exposure limit given as Aliphatic hydrocarbon gases. Alkanes [C₁-C₄].

N/A = Not Applicable.

Note: Composition will vary with geographic location, geologic formation, temperature and pressure.

3. HAZARD IDENTIFICATION

Emergency Overview: This product is a flammable liquid which can form explosive mixtures with air. Material can accumulate static charges which may cause an ignition. Asphyxiant hazard if allowed to accumulate to concentrations that reduce oxygen below safe breathing levels. Please read entire contents of Section 3 of this MSDS for details.

Note: This product has not been tested by El Paso Corporation to determine its specific health hazards. Therefore, the information provided in this section includes health hazard information on the product components.

Carcinogenicity:	NTP	IARC Monographs	OSHA Regulated
Natural Gasoline	No	No	No
Benzene	Yes (1)	Yes (1)	Yes

Potential Health Effects from Overexposure

Acute Effects:

- Eyes:** Slight to moderate eye irritation; contact may cause eye burns or injury.
- Skin:** Moderately irritating to skin; causing redness, drying, itching, and inflammation of skin. Repeated or prolonged contact may result in drying, reddening, itching, pain, inflammation, cracking and possible secondary infection with tissue damage.
- Inhalation:** Irritating to mucous membranes and respiratory tract. Can act as simple asphyxiant. Overexposure may lead to headache, nausea, drowsiness, fatigue, pneumonitis, pulmonary edema, central nervous system depression, leading to coma and respiratory arrest.
- Ingestion:** Stomach irritation, gastritis. Possible effects are headache, nausea, drowsiness, loss of consciousness, convulsions, cyanosis, pneumonitis, pulmonary edema and central nervous system depression, congestion, and capillary hemorrhaging of the lung and internal organs. Aspiration hazard if vomiting occurs.

Chronic Effects: Skin and eye irritation and/or burns. May affect the respiratory tract and central nervous system.

Additional Medical and Toxicological Information: Contact with full strength or dilute formulations of this product aggravate pre-existing dermatitis or respiratory disorders in certain individuals. Recent studies indicate kidney damage and kidney cancer in rats and liver cancer in mice. This product contains benzene, which can cause degeneration in blood forming bone marrow leading to anemia which may further degrade to leukemia, a type of cancer. Acute benzene poisoning causes central nervous system depression. Chronic exposure affects the hematopoietic system causing blood disorders including anemia and pancytopenia. n-butane has been shown to cause mild cardiac sensitization in laboratory test animals. n-hexane is a skin, eye and respiratory tract irritant. It is a cardiac sensitizer, central nervous system depressant and a neurotoxin. Acute exposure may result in dizziness, asphyxia, anesthesia, brain damage and cardiac arrest at high concentrations. Repeated or prolonged exposure may result in peripheral neuropathy, characterized by progressive weakness, facial and limb numbness, color vision abnormalities and paralysis of the limbs. Persons with skin, lung, liver, or kidney disorders may be at increased risk.

4. FIRST AID MEASURES

- Eye Contact:** Immediately flush eyes thoroughly with lukewarm water for at least 15 minutes. Seek medical attention.

Skin Contact: Promptly flush the affected area(s) with lukewarm water and soap. Remove and isolate contaminated clothing and shoes. Do not remove clothing if adhering to skin. Seek medical attention if skin burns occur.

Inhalation: Move victim to fresh air. Call 911, emergency medical service, or Emergency Phone Numbers(s) provided in Section 1. Give artificial respiration if victim is not breathing. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Have exposed individual rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Obtain medical assistance immediately and treat as directed by a medical professional.

5. FIRE FIGHTING MEASURES

Flash Point:	-45°F
Flammable Limits in Air, % by Volume:	Lower: 1.4% Upper: 7.6%
Autoignition Temperature:	495-850°F
Extinguishing Media:	Class B fire extinguisher, dry chemical, foam, or carbon dioxide. For large fires, use unmanned hoses with water spray or fog. If impossible, withdraw from area and let fire burn.
NFPA Ratings:	Health 2, Flammability 3, Reactivity 0, Flammable Liquid

Special Fire Fighting Instructions: BLEVE'S (Boiling Liquid Expanding Vapor Explosions) can occur when a liquid in a pressurized container is heated to temperatures beyond its boiling point. This can lead to failure of the container and damage to the surrounding area.

General Hazard: Flammable. Flowing gasoline can be ignited by self-generated static electricity; containers should be grounded and bonded. Runoff to sewer may create fire or explosion hazard well downstream from the source. Vapors may travel to source of ignition and flash back.

Fire Fighting Instructions: Use a smothering technique for extinguishing fire of this flammable liquid. Do not use a forced- water stream directly on petroleum fires as this will scatter fire. Use a water spray to cool fire-exposed containers until well after fire is out. Do not direct water at source of leak or safety devices; icing may occur. Firefighters should wear self-contained breathing apparatus.

Protective Actions to Take During Fire Fighting: DO NOT extinguish a leaking gas flame unless the leak can be stopped. In many cases it will be preferable to allow continued burning. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material. Do not get water inside containers. Use water spray or fog; do not use straight streams. Note: Use of water spray when fighting fire may be inefficient or cause a chemical reaction. Persons involved in fire fighting response involving this product and its containers/packaging should refer to Section 8 for the proper selection of exposure controls

and personal protective equipment.

Precautions for Fire Involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

6. ACCIDENTAL RELEASE MEASURES

As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering.

Eliminate sources of heat or ignition including internal combustion engines and power tools. Stop gas flow. If indoors, ventilate the affected area. Evacuate building and all affected areas, downwind areas first. Prevent spreading of vapors through sewers, ventilation systems and confined areas. Isolate area until gas has dispersed. For emergency information and procedures to follow in the case of an accidental release, call the Emergency Telephone Number(s) listed in Section 1. In case of spillage, absorb with inert material and dispose of in accordance with applicable regulations. Dike far ahead of liquid spill for later disposal. Never discharge releases directly into sewers or surface waters. Remove any ignition sources and protect from ignition. Water spray may reduce vapor; but may not prevent ignition in closed spaces. A vapor suppressing foam may be used to reduce vapors. Provide sufficient ventilation in the affected area(s) and wear appropriate personal protective equipment as indicated in Section 8 when handling spill material.

Note: Large releases may require the notification of local emergency response agencies. Wear self-contained breathing apparatus if conditions warrant.

7. HANDLING & STORAGE

Handle in accordance with good industrial hygiene and safety practices. These practices include but are not limited to avoiding unnecessary exposure and prompt removal of material from eyes, skin, and clothing. If needed, take first aid actions as indicated in Section 4.

Handling: Use only with adequate ventilation. Wear appropriate personal protective equipment and use exposure controls as indicated in Section 8. Vent slowly to the atmosphere when opening. Avoid all contact with skin and eyes. Avoid breathing product vapors. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Remove contaminated clothing immediately. Wash with soap and water after working with this product.

Storage: Keep in airtight container away from all heat sources. Store in a segregated and approved area. Store in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Keep container in a well-ventilated area. Ground all containers during transfer. Store away from incompatible materials. Cylinders should be separated from oxygen cylinders or other oxidizers by a minimum distance of 20 ft., or by a barrier of non-combustible material at least 5 ft. high having a fire resistance rating of at least 1/2 hour. Store in the original container or an approved alternative made from compatible material. Do not store in unlabeled containers. Treat empty containers in a similar fashion as residual product may exist. Use appropriate containment to avoid environmental contamination.

Storage Temperature and Pressure: Store in a cool well ventilated place at, or below the storage temperature of 50 degrees Celsius. Containers should be stored in room with ambient pressure.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Eye Protection:** Remove contact lenses and wear chemical safety glasses or goggles where contact with liquid or mist may occur.
- Skin Protection:** Wear impervious gloves or appropriate protective clothing made of nitrile rubber or polyvinylalcohol (PVAL) when contact with skin may occur.
- Inhalation:** Full-face self-contained breathing apparatus (SCBA) should be available for emergency use or in applications where airborne concentrations may meet or exceed occupational exposure limits. In non-emergency situations, use NIOSH approved respiratory protective equipment in situations where airborne concentrations may meet or exceed occupational exposure levels.
- Ventilation:** Provide adequate general and local ventilation: (1) to maintain airborne chemical concentrations below applicable exposure limits, (2) to prevent accumulation of flammable vapors and formation of explosive atmospheres, and (3) to prevent formation of oxygen deficient atmospheres, especially in confined spaces. [Note: This product may release gases or vapors that can displace oxygen in enclosed areas.]

9. PHYSICAL & CHEMICAL PROPERTIES

Values given are typical of similar products. There are no test results for this mixture.

Boiling Point @ 1 atm:	102° F	Melting Point:	N/A
Vapor Pressure @ 68° F:	200-800 mmHg	Vapor Density (Air=1):	3-4
% Solubility in H ₂ O:	Negligible	pH:	N/A
Specific Gravity @ 60° F:	0.6-0.7	Evaporation Rate:	>1 (Butyl Acetate=1)
% Volatile by Volume:	100%	Odor:	Gasoline-like
Viscosity (cSt):	N/A	Molecular Wt:	72 (approx.)
Appearance:	Colorless liquid.		

10. STABILITY & REACTIVITY

Stability: Stable under normal conditions of use.

Hazardous Polymerization: Will not occur.

Conditions to Avoid/Incompatibilities: Strong oxidizing agents, heat, sparks, flame and build-up of static electricity, halogens, strong acids and alkalis.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides, and hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Toxicological data does not exist for this mixture.

BENZENE: This product contains benzene, which can cause degeneration in blood forming bone marrow leading to anemia which may further degrade to leukemia, a type of cancer. Acute benzene poisoning causes central nervous system depression. Chronic exposure affects the hematopoietic system causing blood disorders including anemia and pancytopenia. Mutagenic and clastogenic in mammalian and non-mammalian test systems. Reproductive or developmental toxicant only at doses that are maternally toxic, based on tests with animals.

ISOPARAFFINS: Studies in laboratory animals have shown that long-term exposure to similar materials (isoparaffins) can cause kidney damage and kidney cancer in male laboratory rats. However, in-depth research indicates that these findings are unique to the male rat, and that these effects are not relevant to humans.

BUTANES: Studies in laboratory animals indicate exposure to extremely high levels of butanes (1-10 or higher vol.% in air) may cause cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

Altered mental state, drowsiness, peripheral motor neuropathy, irreversible brain damage (so-called Petrol Sniffers Encephalopathy), delirium, seizures, and sudden death have been reported from repeated overexposure to some hydrocarbon solvents, naphthas, and gasoline.

TARGET ORGANS: Central nervous system, respiratory system, mucous membranes, lungs, heart, blood-forming organs, bone marrow, reproductive organs, testes, immune system, lymphatics, skin, and eyes.

12. ECOLOGICAL INFORMATION

Do not discharge into or allow runoff to flow into sewers and natural waterways. Contain spill material and dike for proper disposal. May be hazardous to waterways/wildlife.

13. DISPOSAL INFORMATION

Dispose of this product and its containers/packages, in any form, through a licensed waste disposal company. Follow applicable federal, state and local regulations.

14. TRANSPORT INFORMATION

Proper shipping name: Gasoline

UN/Identification No: UN1203

Hazard Class: 3

Packing group: II

DOT reportable quantity (lbs): Not applicable.

ERG#: 128

15. REGULATORY INFORMATION

EPA SARA TITLE III

Section 302 EPCRA Extremely Hazardous Substances (EHS):

Product Component	CAS No.	Wt%	RQ, lb	TPQ, lb
None				

Section 304 CERCLA Hazardous Substances:

Product Component	CAS No.	Wt%	RQ, lb
Benzene	71-43-2	0-2	10
Cyclohexane	110-82-7	1-5	1000
n-Hexane	110-54-3	2-13	5000

Section 311/312 Hazard Categorization:

Acute:	Chronic:	Fire:	Pressure:	Reactive:
Yes	Yes	Yes	Yes	No

Section 313 EPCRA Toxic Substances

Product Component	CAS No.	Wt. %
Benzene	71-43-2	0-2
Cyclohexane	110-82-7	1-5
n-Hexane	110-54-3	2-13

Key RQ = Reportable Quantity
 TPQ = Threshold Planning Quantity of EHS

Federal Regulatory Summary

Chemical Name	% Vol	CAS	CAA Accidental Release Prevention Substance	RCRA Hazardous Waste	SARA Extremely Hazardous Substance	SARA Toxic Release Chemical
Natural Gasoline	100	8006-61-9	no	no	no	no
Isoparaffins	75-95	N/A	N/A	N/A	N/A	N/A
n-Hexane	2 -13	110-54-3	no	no	no	yes
n-Butane	2 - 5	106-97-8	yes	no	no	no
Cyclohexane	1 - 5	110-82-7	no	yes	no	no
Benzene	0 - 2	71-43-2	no	yes	no	yes

DOT Hazardous Material – All components listed.
 TSCA Chemical Substance Inventory – All components listed.
 Marine Pollutant – Natural Gasoline.

State Regulatory Summary

Chemical Name	% Vol	CAS	CA Hazardous Substance	CA Proposition 65	Delaware Air Quality Management	Idaho Air Pollutant	Illinois Toxic Air Contaminant	Maine Hazardous Air Pollutant
Natural Gasoline	100	8006-61-9	yes	no	no	no	no	no
Isoparaffins	75-95	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Hexane	2 -13	110-54-3	no	no	yes	yes	yes	yes
n-Butane	2 - 5	106-97-8	yes	no	yes	no	no	no
Cyclohexane	1 - 5	110-82-7	yes	no	yes	yes	no	yes
Benzene	0 - 2	71-43-2	yes	yes	yes	yes	yes	yes

Chemical Name	% Vol	CAS	Massachusetts Hazardous Substance	Michigan Critical Material	Minnesota Hazardous Substance	New Jersey RTK Hazardous Substance	New Jersey TCPA EHS	New York Hazardous Substance
Natural Gasoline	100	8006-61-9	yes	no	yes	no	no	no
Isoparaffins	75-95	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n-Hexane	2 -13	110-54-3	yes	no	yes	yes	no	yes
n-Butane	2 – 5	106-97-8	yes	no	yes	yes	no	no
Cyclohexane	1 - 5	110-82-7	yes	no	yes	yes	no	yes
Benzene	0 - 2	71-43-2	yes	yes	yes	yes	no	yes

Chemical Name	% Vol	CAS	Pennsylvania Hazardous Substance	North Carolina Toxic Air Contaminant	Washington PELs for Air Contaminant	West Virginia Toxic Air Pollutant	Wisconsin Hazardous Air Contaminant
Natural Gasoline	100	8006-61-9	no	no	no	no	no
Isoparaffins	75-95	N/A	N/A	N/A	N/A	N/A	N/A
n-Hexane	2 -13	110-54-3	yes	yes	yes	no	yes
n-Butane	2 – 5	106-97-8	yes	no	yes	no	no
Cyclohexane	1 - 5	110-82-7	yes	no	yes	no	no
Benzene	0 - 2	71-43-2	yes	yes	yes	yes	yes

CALIFORNIA PROPOSITION 65 WARNING

Chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm may be found in crude oil and petroleum products. Although it is possible to sufficiently refine a crude oil or its end products to remove the potential for cancer, we are advising that one or more of the listed chemicals may be present in some detectable quantities. Read and follow directions and use care when handling crude oil and petroleum products.

16. OTHER INFORMATION

THIS INFORMATION RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF THIS COMPANY'S KNOWLEDGE AND BELIEVED ACCURATE AND RELIABLE AS OF THE DATE INDICATED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO THE ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY THEMSELVES AS TO THE SUITABILITY AND COMPLETENESS OF SUCH INFORMATION FOR THEIR OWN PARTICULAR USE.

KEY / LEGEND

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - Agreement on Dangerous Goods by Road

CAA - Clean Air Act

CAS - Chemical Abstracts Service Registry Number

CDG - Carriage of Dangerous Goods By Road and Rail Manual

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

CFR - Code of Federal Regulations

EINECS - European Inventory of Existing Chemical Substances Registry Number

ERG - Emergency Response Guidebook
EPCRA - Emergency Planning and Community Right-to-Know Act
GHS - Globally Harmonized System of Classification and Labeling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
ICAO - International Civil Aviation Organization
IMDG - International Maritime Dangerous Goods Code
IMO - International Maritime Organization
MSDS - Material Safety Data Sheet
N/E - Not Established
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PEL - Permissible Exposure Limit
PPE - Personal Protective Equipment
RCRA - Resource Conservation and Recovery Act
RID - Regulations Concerning the International Transport of Dangerous Goods by Rail
RQ - Reportable Quantities
SARA - Superfund Amendments and Reauthorization Act of 1986
SDS - Safety Data Sheet
TCC - Tag Closed Cup
TDG - Transportation of Dangerous Goods
TLV - Threshold Limit Value
TSCA - Toxic Substance Control Act
UN/NA - United Nations / North American Number
UNECE - United Nations Economic Commission for Europe
US DOT - United States Department of Transportation
US EPA - United States Environmental Protection Agency
Vol. - Volume
WHMIS - Workplace Hazardous Materials Information System

This is the end of MSDS A0048.msdx