

# MATERIAL SAFETY DATA SHEET UNLEADED GASOLINE ALL GRADES

Prepared according to U.S. OSHA, CMA, ANSI, Canadian WHMIS, Australian WorkSafe, Japanese Industrial Standard JIS Z 7250:2000, and European Union REACH regulations

#### **SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: UNLEADED GASOLINE ALL GRADES

CHEMICAL FAMILY NAME: Petroleum Hydrocarbon

U.N. NUMBER: UN 1203

U.N. DANGEROUS GOODS CLASS:
SUPPLIER/MANUFACTURER'S NAME:
Gasoline, Flammable class 3, PGII
NGL Crude Logistics, LLC.

ADDRESS: 2900 North Loop West Suite 1250, Houston, TX 77092 USA

EMERGENCY PHONE: TOLL-FREE in USA/Canada 800-424-9300 Chemtrec

BUSINESS PHONE: 713-730-7320 (Product Information)

WEB SITE: <a href="https://www.nglep.com">www.nglep.com</a>
DATE OF PREPARATION: January 3, 2012

DATE OF LAST REVISION: New

#### **SECTION 2 - HAZARDS IDENTIFICATION**

#### **EMERGENCY OVERVIEW:**

Product Description: This product is a compressed, liquefied gas with no color or odor.

**Health Hazards:** Fumes may cause eye and respiratory irritation. May be harmful or fatal if swallowed. May cause lung damage. Overexposure may cause CNS depression. Breathing high concentrations can cause irregular heartbeats which may be fatal.

Flammability Hazards: Extremely Flammable Liquid and Vapors

Reactivity Hazards: This product is not reactive.

Environmental Hazards: Release of the product is expected to cause adverse effects to the aquatic environment.

Emergency Recommendations: Emergency responders must have personal protective equipment and fire protection

appropriate for the situation to which they are responding.

US DOT SYMBOLS

CANADA (WHMIS) SYMBOLS





EUROPEAN and (GHS) Hazard Symbols



Signal Word: Danger!

#### **EU LABELING AND CLASSIFICATION:**

Classification of the substance or mixture according to Regulation (EC) No1272/2008 Annex 1

EC# 289-220-8 Index# 649-378-00-4

#### GHS Hazard Classification(s):

Carcinogen Category 1B Aspiration Toxicity Category 1 Flammable Liquid Category 3

#### **Hazard Statement(s):**

H226: Flammable liquid and vapor

H304: May be fatal if swallowed and enters airways

H350: May cause cancer

#### **Precautionary Statement(s):**

P202: Do not use until all safety precautions are read and understood.

P210: Keep away from heat/sparks/open flame/hot surfaces. – No Smoking

P281: use personal protective equipment as required.

P331: Do not induce vomiting

#### **EU HAZARD CLASSIFICATION PER DIRECTIVE 1999/45/EC:**

[F] Flammable, [Xn] Harmful

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**Risk Phrases:** 

R12: Extremely flammable R45: May cause cancer

R46: May cause heritable genetic damage

R65: harmful: may cause lung damage if swallowed

**Safety Phrases:** 

S9: Keep container in a well ventilated place

S16: Keep away from sources of ignition- No Smoking

S45: In case of accident or if you feel unwell, seek medical

advice immediately S53:Avoid exposure

#### **HEALTH HAZARDS OR RISKS FROM EXPOSURE:**

#### ACUTE:

**INHALATION:** Breathing high concentrations may be harmful.

May cause central nervous system depression or effects. Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure. Breathing high concentrations of this material, for example, in a confined space or by intentional abuse, can cause irregular heartbeats which can cause death.

EYE CONTACT: Contact may cause pain and severe reddening and inflammation of the conjunctiva.

Effects may become more serious with repeated or prolonged contact.

**SKIN CONTACT:** Contact may cause reddening, itching and inflammation.

Skin contact may cause harmful effects in other parts of the body.

**INGESTION:** Swallowing this material may be harmful.

May cause irritation of the mouth, throat and gastrointestinal tract.

May cause central nervous system depression or effects. Symptoms may include salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation".

CHRONIC: The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of gasoline in humans. IARC determined that limited evidence of carcinogenicity in animals exists. IARC's overall evaluation of gasoline, in spite of limited carcinogenicity evidence, has resulted in the IARC designation of gasoline as possibly carcinogenic to humans (Group 2B) because gasoline contains benzene.

**TARGET ORGANS:** ACUTE: Eye, Skin, Respiratory System Central nervous system CHRONIC:

#### SECTION 3 - COMPOSITION AND INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS:	CAS#	EINECS#	ICSC#	WT%	HAZARD CLASSIFICATION; RISK PHRASES	
Premium Unleaded Gasoline	86290-81-5	289-220-8	1400	100%	HAZARD CLASSIFICATION: [F] Flammable, Carc Cat 2, Muta Cat. 2, [Xn] Harmful RISK PHRASES: R12, R45, R46, R65	
COMPONENT INFORMATION						
Saturated Hydrocarbons	Mixture	Not Listed	Not Listed	55 - 85%	HAZARD CLASSIFICATION: None RISK PHRASES: None	
Aromatic Hydrocarbons	Mixture	Not Listed	Not Listed	10 – 40%	HAZARD CLASSIFICATION: None RISK PHRASES: None	
Unsaturated Hydrocarbons	Mixture	Not Listed	Not Listed	1 – 15%	HAZARD CLASSIFICATION: None RISK PHRASES: None	
Toluene	108-88-3	203-625-9	0078	1 – 15%	HAZARD CLASSIFICATION: [F] Flammable, Repr Cat3, [Xn] Harmful, [Xi] Irritant RISK PHRASES: R11, R63, R48/20, R65, R38, R67	
Xylene	1330-20-7	215-535-7	Not Listed	2 – 10%	HAZARD CLASSIFICATION: [F] Flammable, [Xn] Harmful, [Xi] Irritant RISK PHRASES: R10, R20/21, R38	

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1,2,4-Trimethylbenzene	95-63-6	202-436-9	1433	1 – 5%	HAZARD CLASSIFICATION: [F] Flammable, [Xn] Harmful, [Xi] Irritant, [N] Dangerous to the Environment RISK PHRASES: R10, R20, R36/37/38, R51/53	
Benzene	71-43-2	200-753-7	0015	0.5 – 3.5%	HAZARD CLASSIFICATION: [F] Flammable, carc. Cat 1, Muta Cat 2, [T] Toxic, [Xn] Harmful, [Xi] Irritant RISK PHRASES: R11, R45, R46, R48/23/24/25, R65, R36/38	
Hexane	110-54-3	203-777-6	0279	0 – 3%	HAZARD CLASSIFICATION: [F] Flammable, Repr Cat 3, [Xn] Harmful, [Xi] Irritant, [N] Dangerous to the Environment RISK PHRASES: R11, R62, R65, R48/20, R38, R67, R51/53	
Ethyl Benzene	100-41-4	202-849-4	0268	0.5 – 2.0%	HAZARD CLASSIFICATION: [F] Flammable, [Xn] Harmful RISK PHRASES: R11, R20	
Naphthalene	91-20-3	202-049-5	0667	0.1 – 0.5%	HAZARD CLASSIFICATION: Carc Cat 3, [Xn] Harmful, [N] Dangerous to the Environment RISK PHRASES: R40, R22, R50/53	
ii ~	Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).					

NOTE:

ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2004 format. This product has been classified in accordance with the hazard criteria of the 29 CFR 1200 and the MSDS contains all the information required by the 29 CFR 1200, EU Directives and the Japanese Industrial Standard JIS Z 7250: 2000.

#### **SECTION 4 - FIRST-AID MEASURES**

EYE CONTACT: If product enters the eyes, hold eyes open while under gentle running water for at least 15 minutes. Seek medical attention if irritation persists.

SKIN CONTACT: Wash skin thoroughly after handling product. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder clothing before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention if breathing difficulty continues.

**INGESTION:** If product is swallowed, call physician or poison control center for most current response information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Take a copy of the label and/or MSDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing respiratory system or eye problems may be aggravated by prolonged contact.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate over exposure.

#### **SECTION 5 - FIRE-FIGHTING MEASURES**

**AUTOIGNITION TEMPERATURE:** 

**FLASH POINT:** 

-50°F (-45.5°C) (Estimated)

FLAMMABLE LIMITS (in air by volume, %):

495°F (237°C)

FIRE EXTINGUISHING MATERIALS:

Lower (LEL): 1.4% <u>Upper (UEL)</u>: 7.6%

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** 

Extinguish with foam, carbon dioxide, dry powder or water fog.

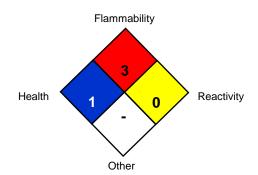
SPECIAL FIRE-FIGHTING PROCEDURES:

Flammable liquid and vapor - may cause flash fire.

Incipient fire responders should wear eye protection. Structural firefighters must wear self-contained breathing apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

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#### NFPA RATING SYSTEM



# HEALTH HAZARD (BLUE) 1 FLAMMABILITY HAZARD (RED) 3 PHYSICAL HAZARD (YELLOW) 0 PROTECTIVE EQUIPMENT EYES RESPIRATORY HANDS BODY

For Routine Industrial Use and Handling Applications

See Sect 8

See

Sect 8

**HMIS RATING SYSTEM** 

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe \* = Chronic hazard

#### SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL AND LEAK RESPONSE: Personnel should be trained for spill response operations.

**SPILLS:** Contain spill if safe to do so. Small Liquid Spills: Absorb with sand or other non-combustible absorbent material. Use non-sparking tools. Large Spillages: Use water spray to disperse vapors and dilute spill to a nonflammable mixture. Prevent runoff from entering drains, sewers, or streams. Dike for later disposal. Dispose of in accordance with applicable federal, state, and local procedures (see Section 13, Disposal Considerations).

#### **SECTION 7 - HANDLING AND STORAGE**

**WORK PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors/mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

**STORAGE AND HANDLING PRACTICES:** Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. Avoid skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

#### **SECTION 8 - EXPOSURE CONTROLS - PERSONAL PROTECTION**

#### **EXPOSURE LIMITS/GUIDELINES:**

CHEMICAL NAME	CAS#	ACGIH TLV	OSHA TWA
Premium Unleaded Gasoline	86290-81-5	300 ppm	Not Listed

Currently, international exposure limits are established for the components of this product. Please check with competent authority in each country for the most recent limits.

**VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation to ensure exposure levels are maintained below the exposure limits provided above. Use local exhaust ventilation to control airborne vapor. Ensure eyewash/safety shower stations are available near areas where this product is used.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

**RESPIRATORY PROTECTION:** Maintain airborne contaminant concentrations below exposure limit guidelines listed above. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or by EU member states.

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**EYE PROTECTION:** Use safety glasses or chemical goggles as appropriate to prevent eye contact. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or appropriate Canadian Standards.

**HAND PROTECTION:** Use chemical resistant gloves to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138 or appropriate Standards of Canada.

**BODY PROTECTION:** Use body protection appropriate to prevent contact (e.g. lab coat, overalls). If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards.

#### **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

PHYSICAL STATE: Liquid

**APPEARANCE & ODOR:** Clear with hydrocarbon odor

ODOR THRESHOLD (PPM): Mild

VAPOR PRESSURE (mmHg): Not Available

VAPOR DENSITY (AIR=1): 3 - 4

EVAPORATION RATE (nBuAc = 1):

BOILING POINT (C°):

FREEZING POINT (C°):

PH:

SPECIFIC GRAVITY 20°C: (WATER =1)

PARTITION COEFFICIENT (n-OCTANOL/WATER)

Not Available

0.70 - 0.77

2.13 - 4.5

#### SECTION 10 - STABILITY AND REACTIVITY

100%

**STABILITY:** Product is stable

**DECOMPOSITION PRODUCTS:** None known

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong oxidizers such as nitrates, chlorates,

peroxides.

VOC%:

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Contact with incompatible materials, heat, sparks and flames.

#### SECTION 11 - TOXICOLOGICAL INFORMATION

**TOXICITY DATA:** The following toxicity data is available for this product: CAS # 86290-81-5 LC50 Oral >14 ml/kg Rat

**SUSPECTED CANCER AGENT:** The following ingredients of this product are found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, IARC and therefore considered to be, or suspected to be cancer-causing agents by these agencies.

Gasoline CAS# 86290-81-5

A2-Possible Human Carcinogen

A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Component Information:

Toluene CAS# 108-88-3 male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence A4 - Not Classifiable as a Human Carcinogen

Xylene CAS# 1330-20-7 male rat-no evidence; female rat-no evidence; male mice-no evidence; female mice-no evidence A4 - Not Classifiable as a Human Carcinogen

Benzene CAS# 71-43-2 Supplement 7 [1987], Monograph 29 [1982] Known Human Carcinogen male rat-clear evidence; female rat-clear evidence; female mice-clear evidence; female mice-clear evidence A1 - Confirmed Human Carcinogen Present

Ethyl Benzene CAS#100-41-4 Monograph 77 [2000] male rat-clear evidence; female rat-some evidence; male mice-some evidence; female mice-some evidence

A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans Present

Naphthalene CAS# 91-20-3 Monograph 82 [2002] Reasonably Anticipated To Be A Human Carcinogen male rat-clear evidence; female rat-clear evidence; female mice-some evidence

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A4 - Not Classifiable as a Human Carcinogen Present

**IRRITANT INFORMATION:** Contact with this product can be irritating to exposed skin, and eyes.

**SENSITIZER INFORMATION:** This product is not considered a sensitizer.

**REPRODUCTIVE TOXICITY INFORMATION:** This product is not reported to cause reproductive effects.

**OTHER INFORMATION ON COMPONENTS:** 

BENZENE: Studies of Workers Overexposed to Benzene: Studies of workers exposed to benzene show clear evidence that overexposure can cause cancer andother diseases of the blood forming organs including Acute Myelogenous Leukemia (AML), and Aplastic Anemia (AA), an often fatal disease. Some studies suggest overexposure to benzene may also be associated with Myelodysplastic Syndrome (MDS). Findings from a Case-Control study of workers exposed to benzene was reported during the 2009 Benzene Symposium in Munich included an increase in Acute Myeloid Leukemias and Non-Hodgkins Lymphoid Neoplasms (NHLN) of the subtype follicular lymphoma (FL) in some occupational categories. Some studies of workers exposed to benzene have shown an association with increased rates of chromosome aberrations in circulating lymphocytes. One study of women workers exposed to benzene suggested a weak association with irregular menstruation. However, other studies of workers exposed to benzene have not demonstrated clearevidence of an effect on fertility or reproductive outcome in humans. Benzene can cross the placenta and affect the developing fetus. Cases of AA have been reported in the offspring of persons severely overexposed to benzene. Studies in laboratory animals indicate that prolonged, repeated exposure to high levels of benzene vapor can cause bone marrow suppression and cancer in multiple organ systems. Studies in laboratory animals show evidence of adverse effects on male reproductive organs following high levels of exposure but no significant effects on reproduction have been observed. Embryotoxicity has been reported in studies of laboratory animals but effects were limited to reduced fetal weight and minor skeletal variations. Benzene has been classified as a proven human carcinogen by OSHA and a Group 1 (Carcinogenic to Humans) material by IARC. The current proposed IARC classification for benzene is summarized as follows: Sufficient evidence for Acute Myeloid Leukemia; limited evidence for Acute Lymphatic Leukemia, Chronic Lymphatic Leukemia, Non-Hodgkin Lymphoma, and Multiple Myeloma. NAPHTHAS: In a large epidemiological study on over 15,000 employees at several petroleum refineries and amongst residents located near these refineries, no increased risk of kidney cancer was observed in association with gasoline exposures (a similar material). In a similar study, no increased risk of kidney cancer was observed among petroleum refinery workers, but there was a slight trend in the incidence of kidney cancers among service station employees, especially after a 30- year latency period.

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.

TOLUENE: Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Abuse of toluene at high concentrations (e.g., glue sniffing and solvent abuse) has been associated with adverse effects on the liver, kidney and nervous system, and can cause CNS depression, cardiac arrhythmias, and death. Studies of workers indicate longterm exposure may be related to impaired color vision and hearing. Some studies of workers suggest longterm exposure may be related to neurobehavioral and cognitive changes. Some of these effects have been observed in laboratory animals following repeated exposure to high levels of toluene. Several studies of workers suggest longterm exposure may be related to small increases in spontaneous abortions and changes in some gonadotropic hormones. However, the weight of evidence does not indicate toluene is a reproductive hazard to humans. Studies in laboratory animals indicate some changes in reproductive organs following high levels of exposure, but no significant effects on mating performance or reproduction were observed. Case studies of persons abusing toluene suggest isolated incidences of adverse effects on the fetus including birth defects. Findings in laboratory animals have been largely negative. Positive findings include small increases in minor skeletal and visceral malformations and developmental delays following very high levels of maternal exposure. Studies of workers indicate long-term exposure may be related to effects on the liver, kidney and blood, but these appear to be limited to changes in serum enzymes and decreased leukocyte counts. Adverse effects on the liver, kidney, thymus and nervous system were observed in animal studies following very high levels of exposure. The relevance of these findings to humans is not clear

ETHYLBENZENE: Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). The incidence of tumors was also elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of renal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals have demonstrated evidence of ototoxicity (hearing loss) following exposure levels as low

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as 300 ppm for 5 days. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

XYLENES, ALL ISOMERS: Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, CNS damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross overexposure. Effects from Prolonged or Repeated Exposure: Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure. The relevance of these observations to humans is not clear at this time. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

C9 AROMATIC HYDROCARBONS: A developmental inhalation study was conducted in laboratory mice. Increased implantation losses, reduced fetal weights, delayed ossification and an increased incidence of cleft palate were observed at the highest exposure level (1,500 ppm). This exposure level was extremely toxic to pregnant female mice (44% mortality). Reduced fetal body weights were also observed at 500 ppm. A multi-generation reproduction inhalation study was conducted in laboratory rats. Reductions in pup weights, pup weight gain, litter size, and pup survival were observed at 1,500 ppm, an exposure level at which significant maternal toxicity was observed. Reduced pup weight gain was also observed at 500 ppm.

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.

N-HEXANE: Long-term or repeated exposure to n-hexane can cause peripheral nerve damage. Initial symptoms are numbness of the fingers and toes. Also, motor weakness can occur in the digits, but may also involve muscles of the arms, thighs and forearms. The onset of these symptoms may be delayed for several months to a year after the beginning of exposure. Testicular atrophy and partial to full loss of the germ cell line were observed in sub-chronic high-dose inhalation studies of laboratory rodents. These effects appeared irreversible. Rodent reproduction studies have shown evidence of reduced fetal weight but no frank malformations.

PENTANES: Studies of pentane isomers in laboratory animals indicate exposure to extremely high levels (roughly 10 vol.%) may induce cardiac arrhythmias (irregular heartbeats) which may be serious or fatal.

#### **SECTION 12 - ECOLOGICAL INFORMATION**

**ENVIRONMENTAL STABILITY:** Readily biodegradable in the environment. **EFFECT OF MATERIAL ON PLANTS or ANIMALS:** Not relevant, due to the form of the product.

**EFFECT OF CHEMICAL ON AQUATIC LIFE:** Toxic to aquatic organisms.

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL:** Waste disposal must be in accordance with appropriate Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan. This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of an "characteristic" hazardous waste. This product could also contain benzene at >0.5 ppm and could exhibit the characteristics of "toxicity" as determined by the toxicity characteristic leaching procedure (TCLP). This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

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#### **SECTION 14 - TRANSPORTATION INFORMATION**

THIS PRODUCT IS HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF

TRANSPORTATION.

**PROPER SHIPPING NAME:** Gasoline

HAZARD CLASS NUMBER and DESCRIPTION: Class 3 Flammable Liquid

**UN IDENTIFICATION NUMBER: UN1203** 

PACKING GROUP: PGII

DOT LABEL(S) REQUIRED: Flammable Liquid Class 3

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): 128

MARINE POLLUTANT: Product or ingredients are not classified by the DOT as a Marine Pollutant (as defined by 49

CFR 172.101, Appendix B)

U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:

This product is classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

TRANSPORT CANADA, TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:

This product is classified as Dangerous Goods, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA):

This product is classified as Dangerous Goods, by rules of IATA

INTERNATIONAL MARITIME ORGANIZATION (IMO) DESIGNATION:

This product is classified as Dangerous Goods by the International Maritime Organization.

EmS No.: F-D, S-U

EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):

This product is classified by the United Nations Economic Commission for Europe to be dangerous goods.

#### **SECTION 15 - REGULATORY INFORMATION**

#### **UNITED STATES REGULATIONS:**

**SARA REPORTING REQUIREMENTS:** This product is subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) as follows: None

**TSCA:** All components in this product are listed on the US Toxic Substances Control Act (TSCA) inventory of chemicals.

#### SARA 311/312:

Acute Health: Yes Chronic Health: Yes Fire: Yes Reactivity: No

**U.S. CERCLA REPORTABLE QUANTITY (RQ):** Toluene CAS# 108-88-3 1,000 Lbs., Xylene CAS# 1330-20-7 100 Lbs., Benzene CAS# 71-43-2 10 Lbs., Hexane CAS# 110-54-3 5,000 Lbs., Ethyl Benzene CAS# 100-41-4 1,000 Lbs., Naphthalene CAS# 91-20-3 100 Lbs.

CLEAN AIR ACT (CAA) SECTION 112(r) ACCIDENTAL RELEASE PREVENTION (40 CFR 68.130): Gasoline CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): This product does contain ingredient(s) are on the California Proposition 65 lists.

WARNING! This product contains ingredients that are known to the State of California to cause cancer or reproductive harm.

#### **CANADIAN REGULATIONS:**

CANADIAN DSL/NDSL INVENTORY STATUS: All of the components of this product are on the DSL Inventory

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** No component of this product is on the CEPA First Priorities Substance lists.

**CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** This product is categorized as Class B2, and D2A as per the Controlled Product regulations

#### **EUROPEAN ECONOMIC COMMUNITY INFORMATION:**

#### **EU LABELING AND CLASSIFICATION:**

Classification of the mixture according to Regulation (EC) No1272/2008. See section 2 for details.

#### **AUSTRALIAN INFORMATION FOR PRODUCT:**

AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES (AICS) STATUS: All components of this product are listed on the AICS.

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STANDARD FOR THE UNIFORM SCHEDULING OF DRUGS AND POISONS: Not applicable.

#### JAPANESE INFORMATION FOR PRODUCT:

**JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS:** The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

#### INTERNATIONAL CHEMICAL INVENTORIES:

Listing of the components on individual country Chemical Inventories is as follows:
Asia-Pac:

Australian Inventory of Chemical Substances (AICS):

Listed
Korean Existing Chemicals List (ECL):

Japanese Existing National Inventory of Chemical Substances (ENCS):

Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS):

Listed
Swiss Giftliste List of Toxic Substances:

Listed
U.S. TSCA:

Listed

#### **SECTION 16 - OTHER INFORMATION**

PREPARED BY: Paul Eigbrett MSDS Authoring PLUS

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