

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: Natural Gasoline
SDS Manufacturer Number: 039420

Other means of identification:

Synonyms: 12#, 13#, 14#, 15#, 16# Gasoline; NGL Pentanes Plus; Natural Gasoline..C5-8

Recommended use of the chemical and restrictions on use:

Product Use/Restriction: Gasoline Blending
Gasoline Blending Stocks (MARPOL Annex I Category)

Chemical manufacturer address and telephone number:

Manufacturer Name: Conoco Phillips
Address: 600 N. Dairy Ashford
Houston, TX 77079-1175
Website: www.conocophillips.com
General Phone Number: 855-244-0762.....E-mail: SDS@conocophillips.com

Emergency phone number:

Emergency Phone Number: Chemtrec: 800-424-9300 (24 Hours)

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:



Signal Word: DANGER.

GHS Class: Flammable Liquid. Category 1.
Aspiration Hazard. Category 1.
Carcinogenicity. Category 1B.
Skin Irritation. Category 2.
Specific Target Organ Toxicity - STOT, Single Exposure SE. Category 3.
Hazardous to the aquatic environment, long-term, chronic, Category 2.

Hazard Statements: H224 - Extremely flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways.
H350 - May cause cancer.
H315 - Causes skin irritation.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary Statements: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P321 - Specific treatment (see Section 4 on this label).
P331 - Do not induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use dry chemical, carbon dioxide to extinguish small fires. Use water for large fires.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Hazards not otherwise classified that have been identified during the classification process:

OSHA Class: May contain or release poisonous hydrogen sulfide gas

Information related to product mixture

Carcinogenicity: May cause cancer Based on component information.

Signs/Symptoms: Effects of overexposure can include slight irritation of the respiratory tract, nausea, vomiting, and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue). Continued exposure to high concentrations can result in vomiting, cardiac irregularities and sudden loss of consciousness.

Toluene

Carcinogenicity: Exposure of rats and mice to toluene at concentrations ranging from 120-1200 ppm for two years did not demonstrate evidence of carcinogenicity. Toluene has not been listed as a carcinogen by IARC.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Toluene	108-88-3	1-10 by weight	
Gasoline (natural gas), natural	68425-31-0	100 by weight	
Benzene	71-43-2	0.1-5 by weight	
Hydrogen Sulfide	7783-06-4	<0.1 by weight	

Total Sulfur: > 0.5 wt%

¹ All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing, and flush affected area(s) with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area(s) thoroughly by washing with mild soap and water or a waterless hand cleaner. If irritation or redness develops, seek medical attention. Wash contaminated clothing before reuse.

Inhalation: (Breathing): If respiratory symptoms or other symptoms of exposure develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. If symptoms persist, seek immediate medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion: (Swallowing): Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Indication of immediate medical attention and special treatment needed:

Note to Physicians: At high concentrations hydrogen sulfide may produce pulmonary edema, respiratory depression, and/or respiratory paralysis. The first priority in treatment should be the establishment of adequate ventilation and the administration of 100% oxygen. Animal studies suggest that nitrites are a useful antidote, however, documentation of the efficacy of nitrites in humans is lacking. If the diagnosis of hydrogen sulfide poisoning is confirmed and if the patient does not respond rapidly to supportive care, the use of nitrites may be an effective antidote if delivered within the first few minutes of exposure. For adults the dose is 10 mL of a 3% NaNO₂ solution (0.5 gm NaNO₂ in 15 mL water) I.V. over 2-4 minutes. The dosage should be adjusted in children or in the presence of anemia, and methemoglobin levels, arterial blood gases, and electrolytes should be monitored closely.

Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents (e.g., in enclosed spaces or with deliberate abuse). The use of other drugs with less arrhythmogenic potential should be considered. If sympathomimetic drugs are administered, observe for the development of cardiac arrhythmias.

Federal regulations (29 CFR 1910.1028) specify medical surveillance programs for certain exposures to benzene above the action level or PEL (specified in Section (i)(1)(i) of the Standard). In addition, employees exposed in an emergency situation shall, as described in Section (i)(4)(i), provide a urine sample at the end of the shift for measurement of urine phenol.

Notes : Most important symptoms and effects:
Acute: Headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue.
Delayed: Dry skin and possible irritation with repeated or prolonged exposure.

Other Comments: Before attempting rescue, first responders should be alert to the possible presence of

hydrogen sulfide, a poisonous gas with the smell of rotten eggs, and should consider the need for respiratory protection (see Section 8). Remove casualty to fresh air as quickly as possible. Immediately begin artificial respiration if breathing has ceased. Consider whether oxygen administration is needed. Obtain medical advice for further treatment.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media: Dry chemical, carbon dioxide, or foam is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters.

Specific hazards arising from the chemical:

Hazardous Combustion Byproducts: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Hydrogen sulfide and oxides of nitrogen and sulfur may also be formed.

Unusual Fire Hazards: Extremely flammable. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. This product will float and can be reignited on surface water. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire. Hazardous combustion/decomposition products, including hydrogen sulfide, may be released by this material when exposed to heat or fire. Use caution and wear protective clothing, including respiratory protection.

Fire Fighting Instructions: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

NFPA Ratings:

NFPA Health: 1
NFPA Flammability: 3
NFPA Reactivity: 0



Notes : NFPA 704 Hazard Class:
(0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personnel Precautions: Extremely flammable. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. May contain or release poisonous hydrogen sulfide gas. If the presence of dangerous amounts of H₂S around the spilled product is suspected, additional or special actions may be warranted, including access restrictions and use of protective equipment. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental precautions:

Environmental Precautions: Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use foam on spills to minimize vapors. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods for cleanup:

Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Precautions for safe handling: Keep away from ignition sources such as heat/sparks/open flame - No smoking. Take precautionary measures against static discharge. Nonsparking tools should be used. Obtain special instructions before use. Do not handle until all safety precautions have been read and

understood. Do not eat, drink, or smoke when using this product. Do not breathe vapors or mists. May contain or release dangerous levels of hydrogen sulfide. Use only outdoors or in well-ventilated area. Wear protective gloves/clothing and eye/face protection. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

Extremely Flammable. May vaporize easily at ambient temperatures. The vapor is heavier than air and may create an explosive mixture of vapor and air. Beware of accumulation in confined spaces and low lying areas. Open container slowly to relieve any pressure. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes. Keep contaminated clothing away from sources of ignition such as sparks or open flames.

Static Accumulation Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding of tanks, transfer piping, and storage tank level floats are necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. Special care should be given to ensure that special slow load procedures for "switch loading" are followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such as gasoline or naphtha). For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids', National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity', and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents'.

Conditions for safe storage, including any incompatibilities:

Storage: Conditions for safe storage: This material may contain or release poisonous hydrogen sulfide gas. In a tank, barge, or other closed container, the vapor space above this material may accumulate hazardous concentrations of hydrogen sulfide. Check atmosphere for oxygen content, H₂S, and flammability prior to entry. Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Information related to product mixture:

Guideline Info: Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Toluene:

Guideline ACGIH: TWA: 20 ppm
Guideline OSHA: Ceiling: 300 ppm TWA: 200 ppm

Gasoline (natural gas), natural:

Guideline ACGIH: TWA: 300 ppm (as Gasoline)
Guideline OSHA: 500 ppm TWA 2000 mg/m³ TWA as Petroleum Distillates (Naphtha) (Rubber Solvent)
Guideline User Defined: 0.5 ppm TWA8hr (as benzene) 0.25 ppm TWA12hr (as benzene) 2.5 ppm STEL (as benzene) (ConocoPhillips Guidelines)

Benzene:

Guideline ACGIH: STEL: 2.5 ppm TWA: 0.5 ppm Skin
Guideline OSHA: Ceiling: 25 ppm STEL: 5 ppm TWA: 10 ppm TWA: 1 ppm

Hydrogen Sulfide:

Guideline ACGIH: STEL: 5 ppm TWA: 1 ppm
Guideline OSHA: Ceiling: 20 ppm
Guideline User Defined: TWA: 5 ppm 8hr TWA: 2.5 ppm 12hr STEL: 15 ppm (ConocoPhillips Guidelines)

Appropriate engineering controls:

Engineering Controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Individual protection measures:

Eye/Face Protection: The use of eye protection that meets or exceeds ANSI Z.87.1 is recommended to protect against potential eye contact, irritation, or injury. Depending on conditions of use, a face shield may be necessary.

Skin Protection Description: The use of gloves impervious to the specific material handled is advised to prevent skin contact. Users should check with manufacturers to confirm the breakthrough performance of their products. Depending on exposure and use conditions, additional protection may be necessary to prevent skin contact including use of items such as chemical resistant boots, aprons, arm covers, hoods, coveralls, or encapsulated suits. Suggested protective materials: Nitrile

Respiratory Protection: Where there is potential for airborne exposure to hydrogen sulfide (H₂S) above exposure limits, a NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used. Under conditions where hydrogen sulfide (H₂S) is NOT detected, a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

If benzene concentrations equal or exceed applicable exposure limits, OSHA requirements for personal

protective equipment, exposure monitoring, and training may apply (29CFR1910.1028 - Benzene).

Other Protective: Eye wash and quick-drench shower facilities should be available in the work area. Thoroughly clean shoes and wash contaminated clothing before reuse.

Notes : Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State: Form: Liquid
Color: Colorless
Odor: Gasoline
Odor Threshold: No Data
Boiling Point: Initial: 84 - 376 deg F/29 - 191 deg C
Melting Point: No Data
Density: Bulk Density: 6.25 lbs/gal
Specific Gravity: (Water=1): 0.75 @ 68 deg F/20 deg C
Solubility: negligible
Vapor Density: (AIR=1): > 1
Vapor Pressure: 350 - 850 mm Hg @ 100 deg F/37.8 deg C
pH: Not Applicable
Coefficient of Water/Oil Distribution: (n-octanol/water) (Kow): No data
Flash Point: -70 to -50 deg F/-57 to -46 deg C
Flash Point Method: Estimate
Lower Flammable/Explosive Limit: (vol % in air): 1.4-1.5
Upper Flammable/Explosive Limit: (vol % in air): 7.4-7.6
Auto Ignition Temperature: 568-853 deg F/280-456 deg C

9.2. Other information:

Notes : Note: Unless otherwise stated, values are determined at 20 deg C (68 deg F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions:

Hazardous Polymerization: Not known to occur.

Conditions To Avoid:

Conditions to Avoid: Avoid high temperatures and all sources of ignition. Prevent vapor accumulation.

Incompatible Materials:

Incompatible Materials: Materials to Avoid: Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous Decomposition Products:

Special Decomposition Products: Not anticipated under normal conditions of use.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Information related to product mixture :

Eye: Causes mild eye irritation. .

Skin: Acute Toxicity:
Skin Absorption:
Hazard: Unlikely to be harmful
LD50 Data: > 2 g/kg
Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

Inhalation: Acute Toxicity:
Hazard: Expected to have a low degree of toxicity by inhalation
Additional Information: May contain or release poisonous hydrogen sulfide gas - see Other Comments.
LC50 Data: > 5.2 mg/L (vapor)

Ingestion: Acute Toxicity:
Ingestion (Swallowing):

Hazard: Unlikely to be harmful
LD50 Data: > 5 g/kg

Sensitization:	Skin Sensitization: Not expected to be a skin sensitizer. Respiratory Sensitization: Not expected to be a respiratory sensitizer.
Carcinogenicity:	May cause cancer Based on component information.
Mutagenicity:	Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.
Reproductive Toxicity:	Not expected to cause reproductive toxicity.
Other Toxicological Information:	This material may contain or liberate hydrogen sulfide, a poisonous gas with the smell of rotten eggs. The smell disappears rapidly because of olfactory fatigue so odor may not be a reliable indicator of exposure. Effects of overexposure include irritation of the eyes, nose, throat and respiratory tract, blurred vision, photophobia (sensitivity to light), and pulmonary edema (fluid accumulation in the lungs). Severe exposures can result in nausea, vomiting, muscle weakness or cramps, headache, disorientation and other signs of nervous system depression, irregular heartbeats, convulsions, respiratory failure, and death.
Target Organ Single Exposures:	May cause drowsiness and dizziness. Signs and Symptoms: Effects of overexposure can include slight irritation of the respiratory tract, nausea, vomiting, and signs of nervous system depression (e.g., headache, drowsiness, dizziness, loss of coordination, disorientation and fatigue). Continued exposure to high concentrations can result in vomiting, cardiac irregularities and sudden loss of consciousness.
Target Organ Repeated Exposures:	Not expected to cause organ effects from repeated exposure.
Aspiration:	May be fatal if swallowed and enters airways.

Toluene :

Carcinogenicity:	Exposure of rats and mice to toluene at concentrations ranging from 120-1200 ppm for two years did not demonstrate evidence of carcinogenicity. Toluene has not been listed as a carcinogen by IARC.
Reproductive Toxicity:	Exposure to toluene during pregnancy has demonstrated limited evidence of developmental toxicity in laboratory animals. Decreased fetal body weight and increased skeletal variations in both inhalation and oral studies, but only at doses that were maternally toxic. No fetal toxicity was seen at doses that were not maternally toxic. Decreased sperm counts have been observed in male rats in the absence of a reduction in fertility. Toluene has been reported to cause mental or growth retardation in the children of solvent abusers who directly inhale toluene during pregnancy.
Target Organ Single Exposures:	Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Subchronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.
Target Organ Repeated Exposures:	Epidemiology studies suggest that chronic occupational overexposure to toluene may damage color vision. Subchronic and chronic inhalation studies with toluene produced kidney and liver damage, hearing loss and central nervous system (brain) damage in laboratory animals. Intentional misuse by deliberate inhalation of high concentrations of toluene has been shown to cause liver, kidney, and central nervous system damage, including hearing loss and visual disturbances.

Benzene :

Carcinogenicity:	Benzene is an animal carcinogen and is known to produce acute myelogenous leukemia (a form of cancer) in humans. Benzene has been identified as a human carcinogen by IARC (Group 1), the US National Toxicology Program and the US Occupational Safety and Health Administration.
Mutagenicity:	Benzene exposure has resulted in chromosomal aberrations in human lymphocytes and animal bone marrow cells. Exposure has also been associated with chromosomal aberrations in sperm cells in human and animal studies.
Reproductive Toxicity:	Some studies in occupationally exposed women have suggested benzene exposure increased risk of miscarriage and stillbirth and decreased birth weight and gestational age. The size of the effects detected in these studies was small, and ascertainment of exposure and outcome in some cases relied on self-reports, which may limit the reliability of these results.
Target Organ Repeated Exposures:	Prolonged or repeated exposures to benzene vapors can cause damage to the blood and blood forming organs, including disorders like leukopenia, thrombocytopenia, and aplastic anemia.

n-Hexane :

Reproductive Toxicity:	Prolonged exposure to high concentrations of n-hexane (>1,000 ppm) resulted in decreased sperm count and degenerative changes in the testes of rats but not those of mice.
Target Organ Single Exposures:	Excessive exposure to n-hexane can result in peripheral neuropathies. The initial symptoms are symmetrical sensory numbness and paresthesias of distal portions of the extremities. Motor weakness is typically observed in muscles of the toes and fingers 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. The neurotoxic properties of n-hexane are potentiated by exposure to methyl ethyl ketone and methyl isobutyl ketone.

Cyclohexane :

Reproductive Toxicity:	Two-generation reproduction and developmental toxicity studies using rats and rabbits exposed (whole-body) to atmospheric concentrations up to 7000 ppm cyclohexane did not detect evidence of developmental toxicity in either species.
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SECTION 12 : ECOLOGICAL INFORMATION

Information related to product mixture :

Ecotoxicity:

Ecotoxicity:	Toxicity: Acute aquatic toxicity studies on samples of gasoline and naphtha streams show acute toxicity values greater than 1 mg/L and mostly in the range 1-100 mg/L. These tests were carried out on water accommodated fractions, in closed systems to prevent evaporative loss. Results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon composition. These substances should be regarded as toxic to aquatic organisms, with the potential to cause long term adverse effects in the aquatic environment. Classification: H411; Chronic Cat 2.
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Persistence and degradability:

Biodegradation:	Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable but are regarded as inherently biodegradable since their hydrocarbon components can be degraded by microorganisms.
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Persistence per IOPC Fund definition: Non-Persistent

Bioaccumulative potential:

Bioaccumulation: Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material range from 3 to greater than 6 and therefore are regarded as having the potential to bioaccumulate. In practice, metabolic processes or physical properties may prevent this effect or limit bioavailability.

Mobility in soil:

Mobility In Environmental Media: Mobility in Soil: On release to water, hydrocarbons will float on the surface and since they are sparingly soluble, the only significant loss is volatilization to air. In air, these hydrocarbons are photodegraded by reaction with hydroxyl radicals with half lives varying from 6.5 days for benzene to 0.5 days for n-dodecane.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Information related to product mixture :

Waste Disposal: The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations.

This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste. However, it would likely be identified as a federally regulated RCRA hazardous waste for the following characteristic(s) shown below. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the MSDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste.

Container contents should be completely used and containers should be emptied prior to discard. Container residues and rinseates could be considered to be hazardous wastes.

Notes :

EPA Waste Number(s)
• D001 - Ignitability characteristic
• D018 - Toxicity characteristic (Benzene)

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name: Shipping Description: UN1203, Gasoline, 3, II
Non-Bulk Package Marking: Gasoline, UN1203
Non-Bulk Package Labeling: Flammable liquid
Bulk Package/Placard Marking: Flammable / 1203
Packaging - References: 49 CFR 173.150; 173.202; 173.242
(Exceptions; Non-bulk; Bulk)
Hazardous Substance: See Section 15 for RQ`s
Emergency Response Guide: 128
Note: The following alternate shipping description order may be used until January 1, 2013:
Proper Shipping name, Hazard Class or Division, (Subsidiary Hazard if any), UN or NA number, Packing Group
Other shipping description elements may be required for DOT compliance.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

IATA Shipping Name: Proper Shipping Name: Gasoline
Hazard Class/Division: 3
Packing Group: II
Non-Bulk Package Marking: Gasoline, UN1203
Labels: Flammable liquid
ERG Code: 3H
Packaging Instruction #:
LTD. QTY Y341 Passenger Aircraft 353 Cargo Aircraft Only 364
Max. Net Qty. Per Package:
LTD. QTY 1 L Passenger Aircraft 5 L Cargo Aircraft Only 60 L

IMDG Shipping Name : Shipping Description: UN1203, Gasoline, 3, II, (FP° C cc), [where FP is the material's flash point in degrees Celsius closed cup]
Non-Bulk Package Marking: Gasoline, UN 1203
Labels: Flammable liquid
Placards/Marking (Bulk): Flammable / 1203
Packaging - Non-Bulk: P001
EMS: F-E, S-E
Note: If transported in bulk by marine vessel in international waters, product is being carried under the scope of MARPOL Annex I.

ICAO Shipping Name: Proper Shipping Name: Gasoline
Hazard Class/Division: 3
Packing Group: II
Non-Bulk Package Marking: Gasoline, UN1203
Labels: Flammable liquid
ERG Code: 3H
Packaging Instruction #:
LTD. QTY Y341 Passenger Aircraft 353 Cargo Aircraft Only 364
Max. Net Qty. Per Package:
LTD. QTY 1 L Passenger Aircraft 5 L Cargo Aircraft Only 60 L

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Information related to product mixture :

TSCA Inventory Status: All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

TSCA 12(b) Export Notification: U.S. Export Control Classification Number: EAR99

CERCLA Section 302: CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):

This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:

Component : Hydrogen Sulfide
TPQ : 500 lb
EPCRA RQ : 100 lb

Section 311/312 Hazard Categories:

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute Health: Yes
Chronic Health: Yes
Fire Hazard: Yes
Pressure Hazard: No
Reactive Hazard: No

Section 313:

CERCLA/SARA - Section 313 and 40 CFR 372:
This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:
Component; Concentration¹; de minimis
n-Hexane ; 2-13 ; 1.0%
Toluene ; 1-10 ; 1.0%
Cyclohexane ; 1-5 ; 1.0%
Benzene ; 0.1-5 ; 0.1%

EPA (CERCLA) Reportable Quantity (in pounds):
EPA's Petroleum Exclusion applies to this material - (CERCLA 101(14)).

California PROP 65:

California Proposition 65:
Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the warning requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):
Toluene:
Type of Toxicity : Developmental Toxicant; Female Reproductive Toxicant
Benzene :
Type of Toxicity : Cancer; Developmental Toxicant; Male Reproductive Toxicant

Canada DSL:

All components are either on the DSL, or are exempt from DSL listing requirements

Canada WHMIS:

WHMIS Hazard Class:
B2 - Flammable Liquids
D2A
D2B

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Personal Protection:

Health Hazard	
Fire Hazard	
Reactivity	
Personal Protection	

Other Information:

SDS Number: 039420

SDS Revision Date:

October 08, 2015

MSDS Revision Notes:

Format change

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer:

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