ALLYN RESOURCES INC.

MSDS INFORMATION

MATERIAL SAFETY DATA SHEET

GASOLINE, BP AVIATION 100LL

MSDS No. 0219802 US/ENGLISH

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER/SUPPLIER:
Air BP
28100 Torch Parkway
Warrenville, IL 60555-4015
USA

EMERGENCY HEALTH INFORMATION:
1 (800) 447-8735

EMERGENCY SPILL INFORMATION:
1 (800) 424-9300 CHEMTREC (USA)

OTHER PRODUCT SAFETY INFORMATION:
1 (630) 434-6377 (USA)

SUBSTANCE: GASOLINE, BP AVIATION 100LL

TRADE NAMES/SYNONYMS:
AVGAS 100LL; AVIATION FUEL; AF5; 2198

CREATION DATE: Oct 19 1999
REVISION DATE: Mar 02 2000

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: NAPHTHA, PETROLEUM, LIGHT ALKYLATE
CAS NUMBER: 64741-66-8

EC NUMBER (EINECS): 265-068-8
PERCENTAGE: <100

COMPONENT: 2,2,4-TRIMETHYLPENTANE
CAS NUMBER: 540-84-1
EC NUMBER (EINECS): 208-759-1
PERCENTAGE: 20-30

COMPONENT: 2,3,4-TRIMETHYLPENTANE
CAS NUMBER: 565-75-3
EC NUMBER (EINECS): 209-292-6
PERCENTAGE: 10-20

COMPONENT: ISOPENTANE
CAS NUMBER: 78-78-4
EC NUMBER (EINECS): 201-142-8
PERCENTAGE: 5-10

COMPONENT: 2-METHYLPENTANE
CAS NUMBER: 107-83-5
EC NUMBER (EINECS): 203-523-4
PERCENTAGE: 1-5

COMPONENT: N-BUTANE
CAS NUMBER: 106-97-8
EC NUMBER (EINECS): 203-448-7
PERCENTAGE: 1-5

COMPONENT: 2,3-DIMETHYLBUTANE
CAS NUMBER: 79-29-8
EC NUMBER (EINECS): 201-193-6
PERCENTAGE: 1-5

COMPONENT: 2,4-DIMETHYLPENTANE
CAS NUMBER: 108-08-7
EC NUMBER (EINECS): 203-548-0
PERCENTAGE: 1-5

COMPONENT: 2,4-DIMETHYLHEXANE
CAS NUMBER: 589-43-5
EC NUMBER (EINECS): 209-649-6
PERCENTAGE: 1-5

COMPONENT: 2,3-DIMETHYLPENTANE
CAS NUMBER: 565-59-3
EC NUMBER (EINECS): 209-280-0
PERCENTAGE: 1-5

COMPONENT: BENZENE
CAS NUMBER: 71-43-2
EC NUMBER (EINECS): 200-753-7
PERCENTAGE: 0.1-0.2

COMPONENT: TETRAETHYL LEAD
CAS NUMBER: 78-00-2
EC NUMBER (EINECS): 201-075-4
PERCENTAGE: 0-0.05

(See Section 8, "Exposure Controls, Personal Protection", for exposure guidelines)

SECTION 3 HAZARDS IDENTIFICATION

NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=3 REACTIVITY=0

EMERGENCY OVERVIEW:
PHYSICAL FORM: liquid
ODOR: hydrocarbon odor
SIGNAL WORD: DANGER!
MAJOR HEALTH HAZARDS: Causes eye and skin irritation. Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness, and nausea, and may lead to unconsciousness or death. Harmful or fatal if liquid is aspirated into lungs. Contains Benzene. Cancer hazard. Can cause blood disorders. Long-term exposure to vapors has caused cancer in laboratory animals. Harmful when absorbed through the skin.
PHYSICAL HAZARDS: Extremely flammable.

POTENTIAL HEALTH EFFECTS:
INHALATION:
Inhalation of vapor/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness, and nausea, and may lead to unconsciousness or death. Can cause respiratory irritation. Cancer hazard. Can cause blood disorders. See Toxicological Information section (Section 11).
SKIN CONTACT:
Causes skin irritation. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis. Cancer hazard. Can cause blood disorders. See Toxicological Information section (Section 11).
EYE CONTACT:
Causes eye irritation.
INGESTION:
Harmful or fatal if liquid is aspirated into lungs. Ingestion causes gastrointestinal irritation and diarrhea. See Toxicological Information section (Section 11).

SECTION 4 FIRST AID MEASURES

INHALATION: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

SKIN CONTACT: Wash exposed skin with soap and water. Remove contaminated clothing and thoroughly clean and dry before reuse. Get medical attention if irritation develops.

EYE CONTACT: Flush eyes with plenty of water. Get medical attention if irritation persists.

INGESTION: If swallowed, do NOT induce vomiting. Get immediate medical attention.

SECTION 5 FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARDS: Severe fire hazard. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back. Vapor/air mixtures are explosive.

EXTINGUISHING MEDIA: carbon dioxide, regular dry chemical, regular foam, water

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

FIRE FIGHTING PROTECTIVE EQUIPMENT: Firefighters should wear full bunker gear, including a positive pressure self contained breathing apparatus.

FLASH POINT: -40 F (-40 C)
LOWER FLAMMABLE LIMIT: >1.4 % by volume
UPPER FLAMMABLE LIMIT: <7.6 % by volume
AUTOIGNITION: 824 F (440 C)
FLAMMABILITY CLASSIFICATION: Extremely flammable.

HAZARDOUS COMBUSTION PRODUCTS:
Thermal decomposition products or combustion: hydrocarbons, oxides of carbon

SECTION 6 ACCIDENTAL RELEASE MEASURES

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. Small spills: Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal. Large spills: Dike for later disposal. Cover with plastic sheet or tarp to minimize spreading and protect from contact with water. Prevent spreading by diking, ditching, or absorbing on inert materials.

SECTION 7 HANDLING AND STORAGE

STORAGE: Store in flammable liquids storage area. Keep container tightly closed. Store away from heat, ignition sources, and open flame in accordance with applicable regulations. Do not store in unlabeled containers.

HANDLING: Keep away from heat, sparks and flame. Keep container tightly closed. Use only with adequate ventilation. Ground and bond containers when transferring materials. Do not cut, puncture, or weld on or near this container. After this container has been emptied, it may contain flammable vapors; observe all warnings and precautions listed for this product. Wash thoroughly after handling. Do not siphon this product by mouth. Do not eat, drink or smoke in areas of use or storage. Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Remove contaminated clothing and thoroughly clean and dry before reuse. SPECIAL PRECAUTIONS: Avoid strong oxidizers. USE AS MOTOR FUEL ONLY.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS:
GASOLINE, BP AVIATION 100LL:
GASOLINE (BULK HANDLING):
300 ppm (900 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
500 ppm (1500 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)
300 ppm ACGIH TWA
500 ppm ACGIH STEL

N-BUTANE:
800 ppm (1900 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
800 ppm ACGIH TWA
800 ppm (1900 mg/m3) MEXICO TWA

HEXANE, ALL ISOMERS OTHER THAN N-HEXANE:
500 ppm (1800 mg/m3) OSHA TWA (vacated by 58 FR 35338, June 30, 1993)
1000 ppm (3600 mg/m3) OSHA STEL (vacated by 58 FR 35338, June 30, 1993)
500 ppm ACGIH TWA
1000 ppm ACGIH STEL
500 ppm (1800 mg/m3) MEXICO TWA
1000 ppm (3600 mg/m3) MEXICO STEL

BENZENE:
1 ppm OSHA TWA
5 ppm OSHA STEL 15 minute(s)
0.5 ppm OSHA action level
0.5 ppm ACGIH TWA (skin)
2.5 ppm ACGIH STEL (skin)
10 ppm (30 mg/m3) MEXICO TWA
25 ppm (75 mg/m3) MEXICO STEL

TETRAETHYL LEAD:
0.075 mg(Pb)/m3 OSHA TWA (skin)
0.1 mg(Pb)/m3 ACGIH TWA (skin)
0.1 mg(Pb)/m3 MEXICO TWA (skin)
0.3 mg(Pb)/m3 MEXICO STEL (skin)

VENTILATION: Control airborne concentrations below the exposure guidelines.

EYE PROTECTION: Do not get in eyes. Wear eye protection.

CLOTHING: Do not get on skin or clothing. Wear protective clothing, including shoes that cannot be penetrated by chemicals or oil, if prolonged or repeated contact is likely.

GLOVES: Wear gloves that cannot be penetrated by chemicals or oil.

RESPIRATOR: Use with adequate ventilation.
Avoid breathing vapor and/or mist.
If heated and ventilation is inadequate, use a NIOSH certified respirator with an organic vapor cartridge and N95 particulate filter.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: liquid
APPEARANCE: clear
ODOR: hydrocarbon odor
BOILING POINT: 68-338 F (20-170 C)
FREEZING POINT: Not available
VAPOR PRESSURE: 5.5-7.0 psi
VAPOR DENSITY (air=1): >1
SPECIFIC GRAVITY (water=1): 0.7 @ 20 C
WATER SOLUBILITY: almost insoluble
PH: Not available
VOLATILITY: 100%
ODOR THRESHOLD: Not available
EVAPORATION RATE: Not available
VISCOSITY: <100 SUS @ 37.8 C
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Keep out of water supplies and sewers.

INCOMPATIBILITIES: strong oxidizing materials

HAZARDOUS DECOMPOSITION:
Thermal decomposition products or combustion: hydrocarbons, oxides of carbon

POLYMERIZATION: Will not polymerize.

SECTION 11 TOXICOLOGICAL INFORMATION

EYE IRRITATION: Testing not conducted. See Other Toxicity Data.

SKIN IRRITATION: Testing not conducted. See Other Toxicity Data.

DERMAL LD50: Testing not conducted. See Other Toxicity Data.

ORAL LD50: Testing not conducted. See Other Toxicity Data.

INHALATION LC50: Testing not conducted. See Other Toxicity Data.

OTHER TOXICITY DATA:
Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.

Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, or excitation. Exposure to very high levels can result in unconsciousness and death. Long-term overexposure to benzene has been associated with certain types of leukemia in humans. In addition, the International Agency for Research on Cancer (IARC), the National Toxicology Program, and OSHA consider benzene to be a human carcinogen. Chronic exposures to benzene at levels of 100 ppm and below have been reported to cause adverse blood effects including anemia. Benzene exposure can occur by inhalation and absorption through the skin. Inhalation and forced feeding studies of benzene in laboratory animals have produced a carcinogenic response in a variety of organs, including possibly leukemia, other adverse effects on the blood, chromosomal changes and some effects on the immune system. Exposure to benzene at levels up to 300 ppm did not produce birth defects in animal studies; however, exposure to the higher dosage levels (greater than 100 ppm) resulted in a reduction of body weight of the rat pups (fetotoxicity). Changes in the testes have been observed in mice exposed to benzene at 300 ppm, but reproductive performance was not altered in rats exposed to benzene at the same level.

Aspiration of this material into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this material.

Sniffing (abuse) or intentional overexposure can produce serious central nervous system effects, including unconsciousness, and possibly death.

SECTION 12 ECOLOGICAL INFORMATION

Ecological testing has not been conducted on this product by BP Amoco.

SECTION 13 DISPOSAL CONSIDERATIONS

The container for this product can present explosion or fire hazards, even when emptied! To avoid risk of injury, do not cut, puncture or weld on or near this container. Since the emptied containers retain product

residue, follow product insert warnings even after container is emptied. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D001. Hazardous Waste Number(s): D008. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 5.0 mg/L. Hazardous Waste Number(s): D018. Dispose of in accordance with U.S. EPA 40 CFR 262 for concentrations at or above the Regulatory level. Regulatory level- 0.5 mg/L.

SECTION 14 TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101 SHIPPING NAME-ID NUMBER:
Gasoline-UN1203

U.S. DOT 49 CFR 172.101 HAZARD CLASS OR DIVISION:
3

U.S. DOT 49 CFR 172.101 PACKING GROUP:
II

U.S. DOT 49 CFR 172.101 AND SUBPART E LABELING REQUIREMENTS:
Flammable liquid

U.S. DOT 49 CFR 172.101 PACKAGING AUTHORIZATIONS:
EXCEPTIONS: 49 CFR 173.150
NON-BULK PACKAGING: 49 CFR 173.202
BULK PACKAGING: 49 CFR 173.242

U.S. DOT 49 CFR 172.101 QUANTITY LIMITATIONS:
PASSENGER AIRCRAFT OR RAILCAR: 5 L
CARGO AIRCRAFT ONLY: 60 L

MARINE POLLUTANT: Marine Pollutant

CANADIAN TDG SHIPPING NAME-ID NUMBER:
Gasoline-UN1203

CANADIAN TDG HAZARD CLASS OR DIVISION:
3

CANADIAN TDG PACKING GROUP:
II

MARINE POLLUTANT: Marine Pollutant

LAND TRANSPORT ADR/RID:
SUBSTANCE NAME: Motor spirit/Gasoline
ID NUMBER: UN1203

ADR/RID CLASS: 3
ITEM NUMBER: 3(b)
WARNING SIGN/LABEL: 3
HAZARD ID NUMBER: 33

AIR TRANSPORT IATA/ICAO:
CORRECT TECHNICAL NAME: Gasoline
ID NUMBER: UN1203
IATA/ICAO CLASS: 3
PACKAGING GROUP: II
LABEL: Flammable liquid

MARITIME TRANSPORT IMDG:
CORRECT TECHNICAL NAME: Gasoline
ID NUMBER: UN1203
IMDG CLASS: 3.1
PACKAGING GROUP: II
EmS No.: 3-07
MFAG Table No.: 311
MARINE POLLUTANT: N
IMDG CODE PAGE: 3141

SECTION 15 REGULATORY INFORMATION

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR Part 302.4): This product is exempt from the CERCLA reporting requirements under 40 CFR Part 302.4. However, if spilled into waters of the United States, it may be reportable under 33 CFR Part 153 if it produces a sheen.

SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR Part 355):
TETRAETHYL LEAD (as Pb): 100 LBS TPQ

SARA TITLE III SECTION 311/312 HAZARDOUS CATEGORIZATION (40 CFR Part 370):
ACUTE: Y
CHRONIC: Y
FIRE: Y
REACTIVE: N
SUDDEN RELEASE: N

SARA TITLE III SECTION 313 (40 CFR Part 372): This product contains the following substance(s), which is on the Toxic Chemicals List in 40 CFR Part 372:
Benzene

STATE REGULATIONS:
California Proposition 65: Y
Known to the state of California to cause the following:
Benzene

Cancer (Feb 27, 1987)
Developmental toxicity (Dec 26, 1997)
Male reproductive toxicity (Dec 26, 1997)

LEAD COMPOUNDS

Cancer (Oct 01, 1992)

TSCA INVENTORY STATUS: Listed on inventory.

OSHA HAZARD COMMUNICATION STANDARD: Flammable liquid. Carcinogen. Irritant. CNS Effects. Target organ effects.

EC INVENTORY (EINECS/ELINCS): Not determined.

JAPAN INVENTORY (MITI): Not determined.

AUSTRALIA INVENTORY (AICS): Not determined.

KOREA INVENTORY (ECL): Not determined.

CANADA INVENTORY (DSL): Listed on inventory.

PHILIPPINE INVENTORY (PICCS): Not determined.

CHINA INVENTORY (IECS): Not determined.

SECTION 16 OTHER INFORMATION

SUPPLEMENTAL INFORMATION: This product contains a chemical listed by the State of New Jersey. This product contains a chemical listed by the State of Pennsylvania.

Prepared by: Product Stewardship and Toxicology

This Material Safety Data Sheet conforms to the requirements of ANSI Z400.1. NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

MATERIAL SAFETY DATA SHEET

========== CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ==========

TRADE NAME: JET A KEROSINE
CAS NUMBER: 8008-20-6
SYNONYM(S): MIDDLE DISTILLATE; S-408; AK8
MSDS NUMBER: 2606
PRODUCT CODE: P 1825
HIERARCHY: 040.010
MANUFACTURER/SUPPLIER: BP Oil Company
ADDRESS: 200 Public Square, Cleveland, OH 44114-2375
TELEPHONE NUMBERS - 24 HOUR EMERGENCY ASSISTANCE:
BP America: 800-321-8642
CHEMTREC Assistance (In U.S.): 800-424-9300
CHEMTREC Assistance (Elsewhere): 703-527-3887
TELEPHONE NUMBERS - GENERAL ASSISTANCE: (Normal Office Hours):
(8:00-4:30 M-F, EST):
Technical: 216-586-6184
MSDS Contact: 216-586-8023

========== COMPOSITION/INFORMATION ON INGREDIENTS ==========

COMPONENT:Kerosine
CAS NO.: 8008-20-6
% BY WT.: 99.9 - 100
EXPOSURE LIMITS:
100 mg/m3 REL NIOSH

========== HAZARDS IDENTIFICATION ==========

EMERGENCY OVERVIEW:

Colorless/Straw/Colored Clear Liquid With a Hydrocarbon Odor.
Danger! Harmful or Fatal If Swallowed. Aspiration Hazard If
Swallowed--Can Enter Lungs and Cause Damage. May Be Harmful If
Inhaled. May Be Irritating To the Skin, Eyes and Respiratory Tract.
Skin Cancer Hazard Based on Tests With Laboratory Animals.
Combustible Liquid & Vapor.

POTENTIAL HEALTH EFFECTS:

SKIN:

Repeated or prolonged contact may result in defatting, redness, itching, inflammation, cracking and possible secondary infection. High pressure skin injections are Serious Medical Emergencies. Injury may not appear serious at first; within a few hours, tissue will become swollen, discolored and extremely painful (see Notes to Physician section). Contact with heated material may cause thermal burns.

EYE:

Exposure to vapors, fumes or mists may cause irritation. Contact with heated material may cause thermal burns.

INHALATION:

May cause respiratory tract irritation. Exposure may cause central nervous system symptoms similar to those listed under "Ingestion" (see Ingestion section). Degenerative changes in the liver, kidneys and bone marrow may occur with prolonged, high concentrations. Repeated or prolonged exposures may cause behavioral changes.

INGESTION:

Aspiration into lungs may cause pneumonitis. May cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting and diarrhea. May cause harmful central nervous system effects. Effects may include excitation, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death.

SPECIAL TOXIC EFFECTS:

IARC has determined that Jet Fuel is not classifiable as to its carcinogenicity to humans (Group 3). IARC has determined that occupational exposures in petroleum refining are probably carcinogenic to humans. Warning: The use of any hydrocarbon fuel in an area without adequate ventilation may result in hazardous levels of combustion products and inadequate oxygen levels.

FIRST AID MEASURES

SKIN:

Remove contaminated clothing immediately. Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists. High pressure skin injections are serious medical emergencies. Get immediate medical attention. Thermal burns require immediate medical attention.

EYE:

Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation results. Thermal burns require immediate medical attention.

INHALATION:

Remove affected person from source of exposure. If not breathing, ensure clear airway and institute cardiopulmonary resuscitation (CPR). If breathing is difficult, administer oxygen if available. After administration of oxygen, continue to monitor closely. Get medical attention.

INGESTION:

Do not induce vomiting because of danger of aspirating liquid into lungs. Get immediate medical attention. If spontaneous vomiting occurs, monitor for breathing difficulty.

NOTES TO PHYSICIAN:

In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption. Consideration should be given to the use of an endotracheal tube, to prevent aspiration. Individuals intoxicated by middle distillates should be hospitalized immediately, with acute and continuing attention to neurologic and cardiopulmonary function. Positive pressure ventilation may be necessary. After the initial episode, individuals should be followed for changes in blood variables and the delayed appearance of pulmonary edema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment. Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated. Avoid emesis unless a large amount has been ingested or it contains a toxic additive. Gastric lavage after endotracheal intubation should be reserved for a patient who requires GI decontamination and is lethargic or obtunded. Safe use of activated charcoal and cathartic should be considered if ingested. Mineral oil cathartics should not be given to patients. Saline cathartics or sorbitol is preferable. In case of skin injection, prompt debridement of the wound is necessary to minimize necrosis and tissue loss.

FIREFIGHTING MEASURES

FLASH POINT:	> 37.7778 C (100 F)
AUTOIGNITION TEMPERATURE:	210 C (410 F)
FLAMMABILITY LIMITS IN AIR (% BY VOL.) LOWER:	> 0.7
FLAMMABILITY LIMITS IN AIR (% BY VOL.) UPPER:	< 5

HAZARDOUS COMBUSTION PRODUCTS:

Combustion may produce CO, CO2 and reactive hydrocarbons.

BASIC FIRE FIGHTING PROCEDURES:

Use water spray, dry chemical, foam or carbon dioxide to extinguish fire. Use water spray to cool fire-exposed containers, structures and to protect personnel. If leak or spill has not ignited, ventilate area and use water spray to disperse gas or vapor and to protect personnel attempting to stop leak. Use water to flush spills away from sources of ignition. Do not flush down public sewers or other

drainage systems. Exposed firefighters must wear MSHA/NIOSH approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

UNUSUAL FIRE & EXPLOSION HAZARDS:

Dangerous when exposed to heat or flame. Containers may explode in heat of fire. Runoff to sewer may cause fire or explosion hazard. Irritating and/or toxic substances may be emitted upon thermal decomposition.

ACCIDENTAL RELEASE MEASURES

If your facility or operation has an "Oil or Hazardous Substance Contingency Plan", activate its procedures. Take immediate steps to stop and contain the spill. Caution should be exercised regarding personnel safety and exposure to the spilled material. For technical advice and assistance related to chemicals, contact CHEMTREC (800/424-9300) and your local fire department. Notify the National Response Center, if required. Also notify appropriate state and local regulatory agencies, the LEPC and the SERC. Contact the local Coast Guard if the release is into a waterway. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. (Also see Personal Protection Information section.)
Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire.
Shut off ignition sources; no flares, smoking or flames in hazard area. Stop leak if you can do it without risk. Water spray may reduce vapor; but it may not prevent ignition in closed spaces. Small Spills: Take up with sand or other noncombustible absorbent material and place into containers for later disposal. Large Spills: Dike far ahead of liquid spill for later disposal.

When reporting a spill to the National Response Center or the Coast Guard, you may need to supply the Coast Guard Chemical Hazard Response Information System (CHRIS) code:

Group Number: 33
CHRIS Code: JPO

Additional spill related information may be found in the U.S. Coast Guard Chemical Hazard Response Information System (CHRIS) Manual.

During an accidental release, personal protection equipment may be required (see Section EXPOSURE CONTROLS/PERSONAL PROTECTION).
Additional regulatory requirements may apply (see Section REGULATORY INFORMATION).

HANDLING AND STORAGE

HANDLING:

Use non-sparking tools. Ground lines and equipment used during transfer to reduce the possibility of static spark-initiated fire or explosion. Do not siphon this product by mouth. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Remove contaminated clothing and clean

before reuse. Wash thoroughly after work using soap and water.

Empty containers may contain toxic, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose containers unless adequate precautions are taken against these hazards.

STORAGE:

Store in tightly closed containers in cool, dry, isolated, well-ventilated area away from heat, sources of ignition and incompatibles.

EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Ventilation and other forms of engineering controls are often the preferred means for controlling chemical exposures.

PERSONAL PROTECTION EQUIPMENT (PPE):

EYE PROTECTION:

Avoid eye contact with this material. Wear chemical safety goggles. Provide an eyewash station immediately accessible to the work area.

SKIN PROTECTION:

Avoid skin contact. When working with this substance, wear appropriate chemical protective gloves. Depending upon conditions of use, additional protection may be necessary such as face shield, apron, armcovers, etc.

RESPIRATORY PROTECTION:

If exposure limits are exceeded or if irritation is experienced, NIOSH approved respiratory protection should be worn. Respiratory protection may be needed for non-routine or emergency situations.

See Section COMPOSITION/INFORMATION ON INGREDIENTS For Exposure Guidelines.

PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT:	148.9 C (300.02 F)
SP. GRAVITY (Water=1):	0.825 @ 15.56 C (60.008 F)
MELTING POINT:	NA
% VOLATILE:	100
VAPOR PRESSURE:	0.4 MM HG @ 20 C (68 F)
EVAPORATION RATE:	Slower
VAPOR DENSITY (Air=1):	4.7
VISCOSITY:	1.3 - 2.2 CST @ 37.8 C (100.04 F)
% SOLUBILITY IN WATER:	Negligible
POUR POINT:	ND
pH:	ND
BULK DENSITY:	ND
MOLECULAR WEIGHT:	NA

MOLECULAR FORMULA: Mixture
ODOR/APPEARANCE:
Colorless/Straw/Colored Clear Liquid With a Hydrocarbon Odor.

STABILITY AND REACTIVITY

STABILITY/INCOMPATIBILITY:

Stable. Avoid contact with strong oxidizers.

TOXICOLOGICAL INFORMATION

EYE EFFECTS:

Slightly Irritating. Rabbit Draize = 2.0/110.

SKIN EFFECTS:

Practically Non-Toxic (Acute Exposure). Rabbit dermal LD50 = >5 ml/kg.
Moderately To Severely Irritating. Rabbit dermal PSI = 5.5.

ACUTE ORAL EFFECTS:

Moderately Toxic (Acute Exposure). Human oral LDLo = ~10 mls. Rat oral LD50 = > 5 g/kg.

ACUTE INHALATION EFFECTS:

Practically Non-Toxic (Acute Exposure). Rat 4-hour LC50 = > 5 mg/L.

SENSITIZATION:

Based on the results obtained in a guinea pig dermal sensitization test, this product is not considered to be a skin sensitizer.

CHRONIC EFFECTS / CARCINOGENCITY:

Results from a lifetime chronic skin painting study indicate that skin tumors may be formed with repeated and prolonged skin contact.

MUTAGENICITY:

This component was tested in a variety of mutagenicity assays and the results were generally negative. However, this product was positive in a Mouse Lymphoma Assay. This material has been shown to induce a genetic change in a bacterial test system (Modified Ames).

DISPOSAL CONSIDERATIONS

WASTE DISPOSAL (Resource Conservation & Recovery Act - RCRA):

This material, when discarded or disposed of, is a characteristic hazardous waste according to Federal regulations (40 CFR 261). This material exhibits the characteristic of ignitable and is assigned the EPA Hazardous Waste Number of D001. The discarding or disposal of this material must be done at a properly permitted facility in accordance with the regulations of 40 CFR 262, 263, 264, and 268.

Additionally, the discarding or disposal of this material may be further regulated by state, regional, or local regulations. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate. The transportation, storage, treatment and disposal of this waste material must be conducted in compliance with all applicable Federal, state, and local regulations.

There may be specific current regulations at the local, regional, or state level that pertain to this information. Chemical additions, processing, or otherwise altering this material may make the waste management information presented in this MSDS, incomplete, inaccurate, or otherwise inappropriate.

========== TRANSPORT INFORMATION ==========

U.S. DEPARTMENT OF TRANSPORTATION (D.O.T.):

Proper Shipping Name (49 CFR 172.101):	Fuel, Aviation, Turbine Engine
Hazard Class (49 CFR 172.101):	3
UN/NA Code (49 CFR 172.101):	UN 1863
Packing Group (49 CFR 179.101):	PG III
Bill Of Lading Desc. (49 CFR 172.101):	Fuel, Aviation, Turbine Engine, 3, UN 1863, PG III
Labels Required (49 CFR 172.101):	Flammable Liquid
Placards Required (49 CFR 172.101):	Flammable

INTERNATIONAL AND DOMESTIC AIR TRANSPORTATION:

IATA Proper Shipping Name:	Fuel, Aviation, Turbine Engine
Hazard Class:	3
Subsidiary Risk:	None
UN Code:	UN 1863
Package Specification:	309, 4309, 310
Labels Required:	Flammable Liquid, Orientation Arrows (For 310, Include Cargo Aircraft Only)

INTERNATIONAL WATER TRANSPORTATION:

IMDG Proper Shipping Name:	Fuel, Aviation, Turbine Engine
Hazard Class:	3.2
UN Code:	UN 1863
IMDG Page Number:	3271
Labels Required:	Flammable Liquid, Orientation Arrows
Placards Required:	Flammable

CANADIAN TRANSPORTATION OF DANGEROUS GOODS (T.D.G.):

Shipping Name:	Fuel, Aviation, Turbine

	Engine
PIN (UN/NA):	UN 1863
Regulated Class:	3
Division:	NA
Packaging Group:	PG III
Labels Required:	Flammable Liquid, Orientation Arrows
Placards Required:	Flammable

========== REGULATORY INFORMATION ==========

NOTIFICATION:

Any spill or release, or substantial threat of release, of this material to navigable water (virtually any surface water) sufficient to cause a visible sheen upon the water must be reported immediately to the National Response Center (800/424-8802), as required by U.S. Federal Law. Failure to report may result in substantial civil and criminal penalties. Also contact the Coast Guard and appropriate state and local regulatory agencies.

US EPA TOXIC SUBSTANCE CONTROL ACT (TSCA):

All components of this product are listed on the TSCA inventory.

US EPA SUPERFUND AMENDMENTS & REAUTHORIZATION ACT (SARA) TITLE III INFORMATION:

Listed below are the hazard catagories for SARA Section 311/312 (40 CFR 370):

Immediate Hazard:	X
Delayed Hazard:	X
Fire Hazard:	X
Pressure Hazard:	-
Reactivity Hazard:	-

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):

All components of this product are listed on the Canadian DSL Inventory.

CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) CATEGORIES:

The following WHMIS categories apply to this product:

Compressed Gas:	-	Other Toxic Effects:	X
Flammable/Combustible:	X	Bio Hazardous:	-
Oxidizer:	-	Corrosive:	-
Acutely Toxic:	X	Dangerously Reactive:	-

========== OTHER INFORMATION ==========

NFPA RATINGS:		HMIS RATINGS:	
Health:	0	Health:	0
Flammability:	2	Flammability:	2
Reactivity:	0	Reactivity:	0

Special Hazards: - Personal Protective Equipment:H

REVISION DATE: 08-apr-1999
REPLACES SHEET DATED: 03-nov-1998
COMPLETED BY: BP OIL HSEQ DEPARTMENT
REVISION SUMMARY: The following section(s) have been revised since the previous issue of this MSDS:
TRANSPORT INFORMATION

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Material Safety Data Sheet. However, no warranty or representation, express or implied, is made as to the accuracy or completeness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. In addition, no responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product.

ND: No Data NA: Not Applicable *See specific note or section